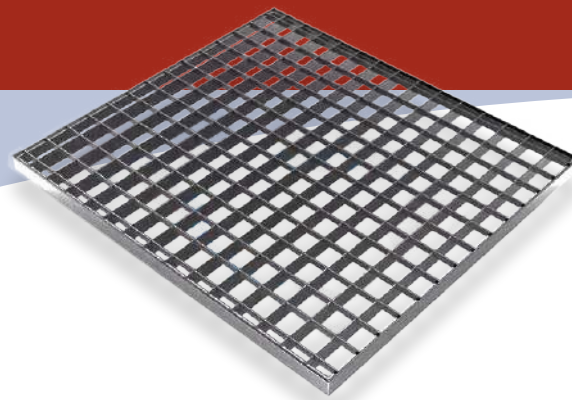




Steel Grating

ShunBo Metal Grating Product Catalog





SHUNBO GRATING

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ORDER INFORMATION

Ordering steel grating can be a perplexing task for those who have never placed such an order previously. The following is a checklist that can assist you in ensuring that each dimension of the task is accurate when submitting an order. Of course, we are more than happy for you to entrust your confusion to our professional team and provide you with better solutions

Material

- › Carbon steel
- › Stainless steel
- › FRP
- › Aluminium

Type of grating

- › Welded
- › Press-locked
- › Riveted
- › Heavy-duty

Bearing bar size

Cross bar size

Bearing bar pitch

Cross bar pitch

Span (bearing bar direction)

Surface Treatment

- › Painted
- › Galvanized
- › Untreated

Surface

- › Plain surface
- › Serrated surface

Type of anchorage

- › Welded
- › Saddle clip
- › G-clip
- › Grate fast clip

Indicate any banding, kick plate, or nosing requirements

Shipping and tagging instruction

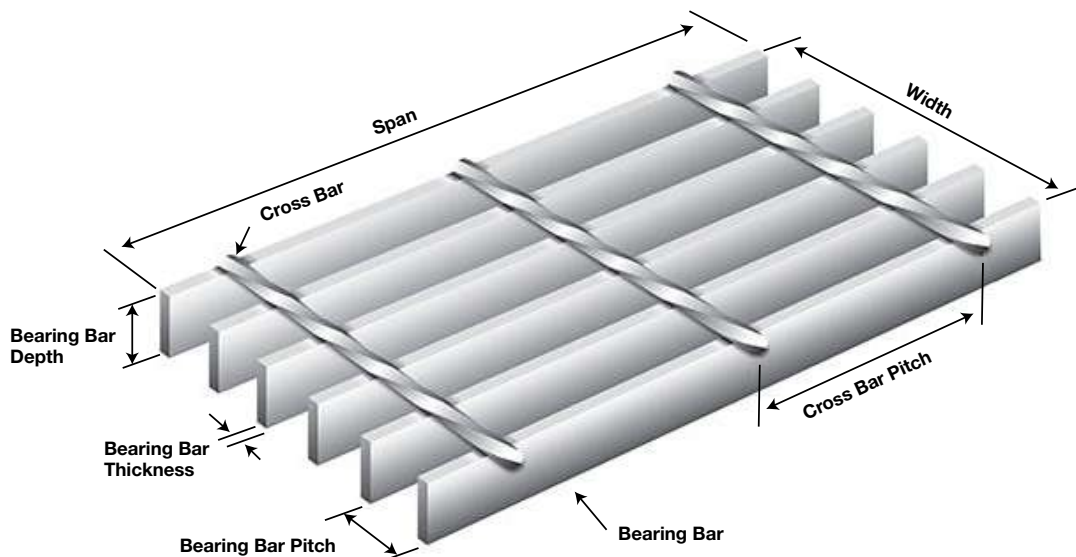
Drawing Including:

- Fully dimensioned framing plan drawings
- Fully dimensioned general arrangement drawings
- Fully dimensioned grating piece drawings

Think about:

Application or use of product (including environment)

Physical requirements, opening size, percent of open area, etc.



ABOUT SHUNBO METAL



Steel Bar Grating – An Ideal Solution For Projects
It's perfect for applications ranging from trenches
and stair treads to platforms and steel flooring.



Hebei Shunbo Metal Wire Mesh Manufacturing Co., Ltd. is a modern enterprise specializing in the research and development, design, manufacturing, and sales of steel grating.

We have first-class production equipment and technology, and are committed to providing customers with high-quality steel grating products. Our product line is diverse and can meet diverse customization needs.

Our company is equipped with three state-of-the-art steel grating welding machines and three streamlining saw cutting machines, enabling us to produce over 120 tons of steel grating daily. With a team of more than 120 skilled employees, our dedicated R&D team is continuously developing products that meet customer demands and market trends.

We specialize in tailoring our offerings to various environments, with the ability to customize products based on specific load-bearing requirements, spans, shapes, colors, and cost considerations. Our expertise allows us to design and manufacture the optimal products to suit the unique needs of each of our clients.

- › Founded in 2008.
- › Strict QC system in the production line.
- › Standardized production under ISO 9001
- ›

International standard.

- › Multiple specifications of steel grating for your option.
- › Advanced equipment for efficient production and fast delivery.
- › Embracing rigorous and innovative spirit, we are leading the industry.



PRODUCTION CAPACITY

Production Line Capacity

Welded Bar Grating 15000 pcs/month
Press Bar Grating 10000 pcs/month
Stair Tread 10000 pcs/month
Drainage Cover 8000 pcs/month

Actual Units Produced (Previous 12 months)

Welded Bar Grating 15000 pcs/month
Press Bar Grating 10000 pcs/month
Stair Tread 10000 pcs/month
Drainage Cover 8000 pcs/month



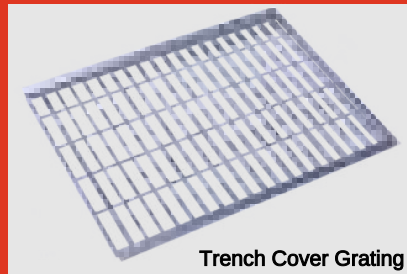
Welded Bar Grating



Press Bar Grating



Stair Tread Steel Grating



Trench Cover Grating

PRODUCTION MACHINERY

Machine Name	Quantity	Number of Year(s) Used	Condition
Straightening Machin	15	4	Acceptable
Welding Machine	50	4	Acceptable
Plate Cutting Machine	8	3	Acceptable
Grating Cutting Machine	5	2	Acceptable
Spray Painting Machine	3	2	Acceptable
Pressure Welding Machine	3	3	Acceptable
Hot Dipped Galvanized Line	1	3	Acceptable
Electro Galvanized Line	2	3	Acceptable



Straightening Machine



Plate Cutting Machine



Pressure Welding Machine



Grating Cutting Machine



Spray Painting Machine



Hot Dipped Galvanized Line

TESTING MACHINERY

Machine Name	Quantity	Number of Year(s) Used	Condition
Tape measure	5	2	Acceptable
Vernier Caliper	4	2	Acceptable
Coating Thickness Tester	4	2	Acceptable



Step 1

Raw Material
(plate)



Step 3

Plate Cutting

Step 1

Step 2

Step 3

Step 4



Step 2

Raw Material (wire)



Step 4

Wire
Straightening &
Cutting



Step 5

Steel Grating
Welding

Step 7

Standard Steel
Grating Cutting



Step 10

Inspection

Step 11

Finished



Step 5

Step 6

Step 7

Step 8

Step 9

Step 10

Step 11

Step 12



Step 6

Edge Cutting



Step 9

Surface Treatment
(Galvanized)



Step 8

Edge Banding

Step 12

Packaging &
Storage



QUALITY CONTROL



Our company has established a strict enterprise testing process to ensure that all steel grilles are strictly supervised and inspected in accordance with international standard quality control systems, ensuring that customers receive qualified products.

From raw materials to the factory to finished products leaving the factory, there are dedicated personnel conducting tracking and testing at every stage. Inspection items are as follows:

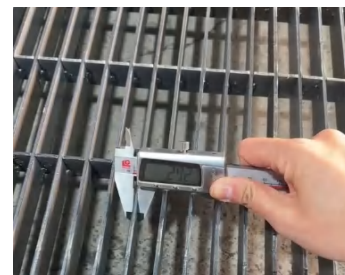


Appearance Inspection.

Every steel grating is meticulously inspected to ensure a seamless and uniform surface as well as a polished appearance. Any units with defects are identified and replaced with qualified ones to maintain our high standards.



Raw material inspection



Bearing bar size inspection

Sizing inspection.

Size inspection is crucial. We meticulously measure the thickness of the plate, the size of the load-bearing bars, the size of the cross bars, as well as the overall width, length, and height of the steel grating using professional measuring tools such as meter rulers and vernier calipers. We are committed to ensuring that all dimensions are strictly within the tolerance ranges specified by international standards and customer requirements.



Dimensional inspection

Performance inspection.

We conduct load-bearing tests on steel grating samples in accordance with customer requirements and international standards. The corresponding test reports will be provided along with the delivery of the steel grating, ensuring you have a comprehensive understanding of the product's performance.

Package inspection.

Steel grating is commonly packaged using steel strapping or placed on wooden or metal pallets. We determine the quantity and weight of each package based on transportation conditions and the specific requirements of our customers. We focus on the solidity and strength of the packaging to ensure that each package can withstand the rigors of transport, safeguarding the product from damage and ensuring it arrives safely at our customers' locations.



Package inspection

WHAT IS STEEL GRATING?

Steel Grating is an open-grid structure made from steel, widely used in industrial and architectural fields. It is formed by welding, press-locking, or interlocking bearing bars and cross bars to create a sturdy load-bearing surface. Known for its high strength, durability, and versatility, steel grating is suitable for a variety of applications.

Key Features of Steel Grating:

1. **High Strength and Durability:** Steel grating can withstand heavy loads, impact, and wear, making it ideal for high-traffic areas and industrial environments.
2. **Slip Resistance:** The open-grid design provides excellent anti-slip properties, reducing the risk of slipping in wet or oily conditions.
3. **Ventilation and Drainage:** The open structure allows air, light, and liquids to pass through, making it suitable for walkways, platforms, and drainage covers.
4. **Corrosion Resistance:** Steel grating can be galvanized or coated to enhance its rust and corrosion resistance, extending its service life in harsh environments.
5. **Customizability:** It can be manufactured in various sizes, shapes, and configurations to meet project requirements.

Common Applications:

- **Industrial Walkways and Platforms:** Provides safe and stable walking surfaces for workers in factories, workshops, and warehouses.
- **Trench Covers and Drainage Grates:** Used in wastewater treatment plants, roads, and parking lots.
- **Stair Treads and Catwalks:** Offers secure footing in elevated areas.
- **Safety Fences and Railings:** Used for safety and protection in buildings and outdoor areas.
- **Architectural Decoration:** Used in modern designs for facades, sunshades, and railings.

Types of Steel Grating:

1. **Welded Steel Grating:** Bearing bars and cross bars are welded together for maximum strength.
2. **Press-Locked Grating:** Bars are mechanically locked without welding, providing a smooth surface.
3. **Riveted Grating:** Bars are joined using rivets, offering a traditional appearance.
4. **Swage-Locked Grating:** Cross bars are swaged into bearing bars for a tight fit.
5. **Serrated Steel Grating:** Bearing bars feature serrated surfaces, providing enhanced slip resistance, especially suitable for slopes, stair treads, and other high-safety areas.

Steel grating is a practical and cost-effective solution that meets many structural and safety requirements while combining functionality and aesthetic appeal.

Steel Grating Product Series



Galvanized



Painted



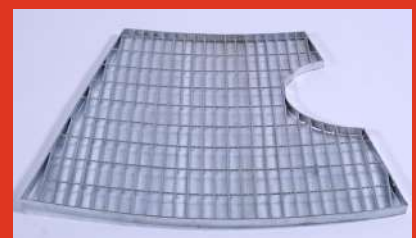
Untreated



Heavy Duty Steel grating



Riveted Steel Grating

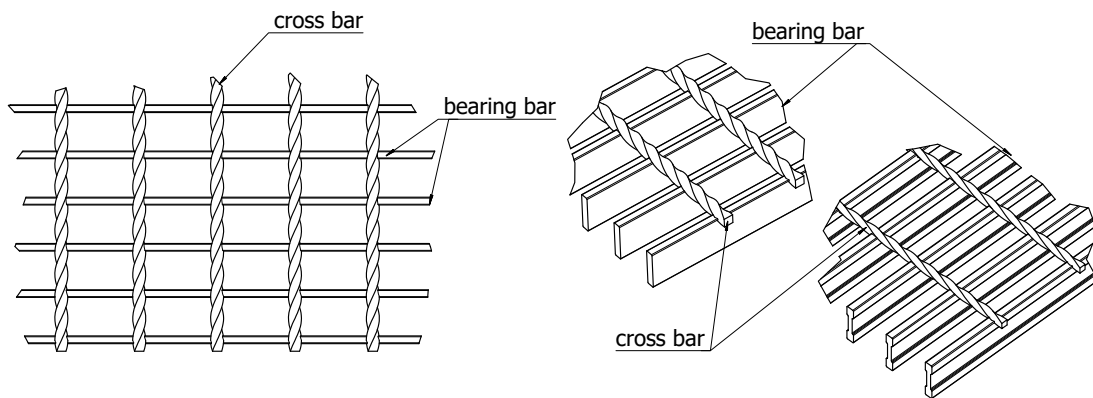


WELDED STEEL GRATING

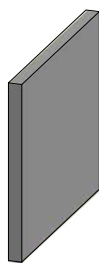
Welded steel grating is a top choice in industry for its durability and versatility. Made by welding load-bearing bars to cross bars with heat and pressure, it forms a solid, one-piece structure that's rigid yet smooth for safe walking.

Available in stainless or low carbon steel, this grating offers slip resistance and corrosion resistance, naturally or through galvanization. Its excellent drainage makes it ideal for areas where liquid runoff is a concern. Known for its high load capacity and strength, welded steel grating is used for heavy-duty platforms and traffic areas. Common applications include walkways, barriers, drainage covers, platforms, vents, and stair treads.

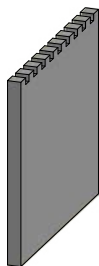
Low maintenance and easy to clean due to its open design, welded steel grating is a popular option for industrial and commercial settings where reliability is key.



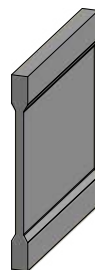
BEARING BAR TYPE



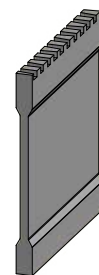
Flat Bar Type



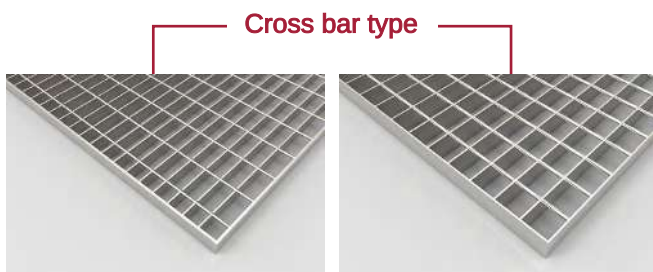
Serrated Type



I-Bar Type

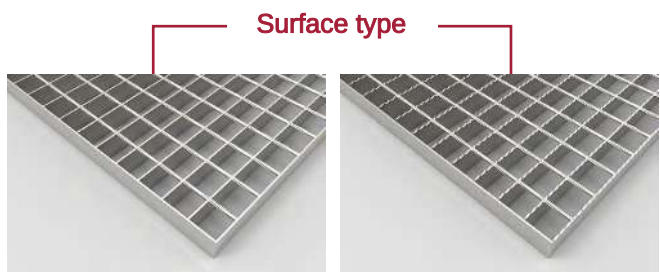


Serrated I-Bar Type



Round cross bar

Square twisted cross bar



Plain surface

Serrated surface

Serrated Grating

Advantages

- › High strength and load capacity
- › Anti-slip surface
- › Corrosion resistance
- › Good drainage function
- › Easy to install and maintain

Technical Specifications

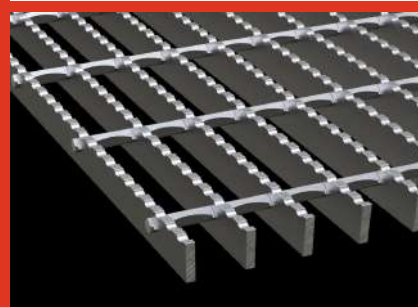
- › Material: carbon steel and stainless steel.
- › Surface treatment: galvanized, painted, untreated.
- › Surface type: standard plain surface, serrated surface.
- › Bearing bar type: flat bar and I-bar.
- › Cross bar type: round and square twisted cross bar.



Carbon steel serrated grille

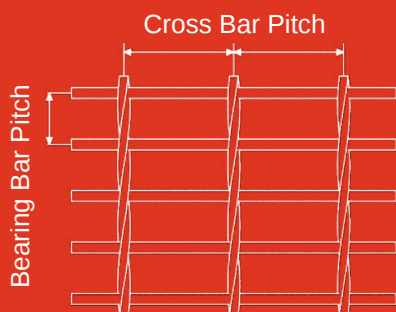


Stainless steel serrated grille



Aluminum serrated grille

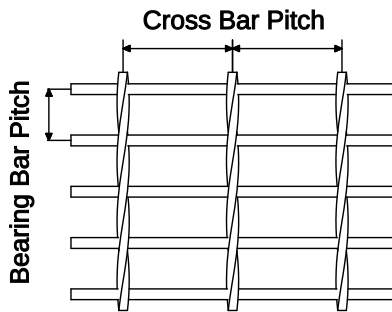
SPECIFICATION OF W-19 WELDED STEEL GRATING



Item	Bearing Bar Size	Bearing Bar Pitch	Cross Bar Pitch	Weight (Lbs./S.F.)
SGW19-01	3/4" × 1/8"	1-3/16"	4"	4.0
			2"	4.3
SGW19-02	3/4" × 3/16"	1-3/16"	4"	5.6
			2"	6.4
SGW19-03	1" × 1/8"	1-3/16"	4"	5.1
			2"	5.4
SGW19-04	1" × 3/16"	1-3/16"	4"	7.3
			2"	8.0
SGW19-05	1-1/4" × 1/8"	1-3/16"	4"	6.1
			2"	6.5
SGW19-06	1-1/4" × 3/16"	1-3/16"	4"	8.9
			2"	9.7
SGW19-07	1-1/2" × 1/8"	1-3/16"	4"	7.3
			2"	7.9
SGW19-08	1-1/2" × 3/16"	1-3/16"	4"	10.6
			2"	11.8
SGW19-09	1-3/4" × 3/16"	1-3/16"	4"	12.2
			2"	13.5
SGW19-10	2" × 3/16"	1-3/16"	4"	13.9
			2"	15.1
SGW19-11	2-1/4" × 3/16"	1-3/16"	4"	15.4
			2"	16.7
SGW19-12	2-1/2" × 3/16"	1-3/16"	4"	17.1
			2"	18.3

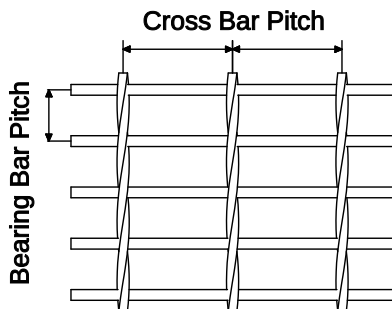
WELDED STEEL GRATING

SPECIFICATION OF **W-15** WELDED STEEL GRATING



Item	Bearing Bar Size	Bearing Bar Pitch	Cross Bar Pitch	Weight (Lbs./S.F.)
SGW15-01	3/4" x 1/8"	15/16"	4"	4.8
			2"	4.8
SGW15-02	3/4" x 3/16"	15/16"	4"	6.9
			2"	7.0
SGW15-03	1" x 1/8"	15/16"	4"	6.2
			2"	6.4
SGW15-04	1" x 3/16"	15/16"	4"	9.0
			2"	9.3
SGW15-05	1-1/4" x 1/8"	15/16"	4"	7.5
			2"	7.9
SGW15-06	1-1/4" x 3/16"	15/16"	4"	11.1
			2"	11.3
SGW15-07	1-1/2" x 1/8"	15/16"	4"	9.0
			2"	9.5
SGW15-08	1-1/2" x 3/16"	15/16"	4"	13.1
			2"	13.7
SGW15-09	1-3/4" x 3/16"	15/16"	4"	15.2
			2"	15.8
SGW15-10	2" x 3/16"	15/16"	4"	17.3
			2"	17.9
SGW15-11	2-1/4" x 3/16"	15/16"	4"	19.2
			2"	20.3
SGW15-12	2-1/2" x 3/16"	15/16"	4"	21.3
			2"	22.1

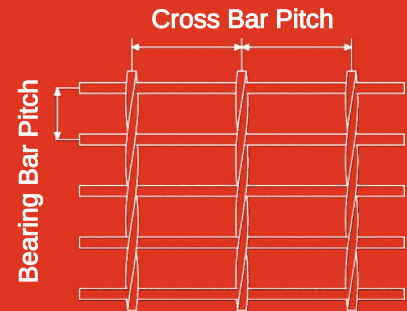
SPECIFICATION OF **W-11** WELDED STEEL GRATING



Item	Bearing Bar Size	Bearing Bar Pitch	Cross Bar Pitch	Weight (Lbs./S.F.)
SGW11-01	3/4" x 1/8"	11/16"	4"	6.1
			2"	6.6
SGW11-02	3/4" x 3/16"	11/16"	4"	9.1
			2"	9.0
SGW11-03	1" x 1/8"	11/16"	4"	8.0
			2"	8.5
SGW11-04	1" x 3/16"	11/16"	4"	11.9
			2"	11.9
SGW11-05	1-1/4" x 1/8"	11/16"	4"	9.9
			2"	10.3
SGW11-06	1-1/4" x 3/16"	11/16"	4"	14.9
			2"	14.8
SGW11-07	1-1/2" x 1/8"	11/16"	4"	11.8
			2"	12.6
SGW11-08	1-1/2" x 3/16"	11/16"	4"	17.0
			2"	17.8
SGW11-09	1-3/4" x 3/16"	11/16"	4"	20.4
			2"	20.8
SGW11-10	2" x 3/16"	11/16"	4"	23.2
			2"	23.8
SGW11-11	2-1/4" x 3/16"	11/16"	4"	25.9
			2"	26.5
SGW11-12	2-1/2" x 3/16"	11/16"	4"	28.7
			2"	29.3

HEAVY DUTY GRATING

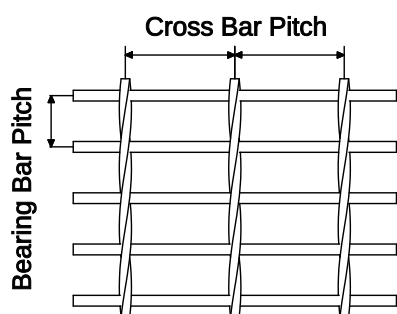
- › Material: carbon steel and stainless steel.
- › Surface treatment: galvanized, painted, untreated.
- › Surface type: plain surface, serrated surface.
- › Bearing bar type: flat bar and I-bar.
- › Cross bar type: round and square twisted cross bar.



SPECIFICATION OF W-15 WELDED STEEL GRATING

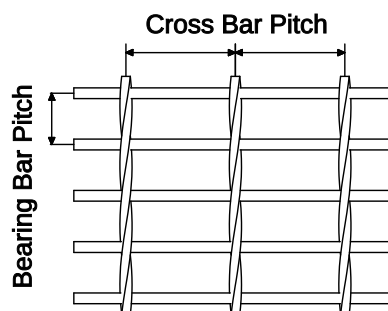
Item	Bearing Bar Size	Bearing Bar Pitch	Cross Bar Pitch	Weight (Lbs./S.F.)
HDSGW15-01	1" × 1/4"	15/16"	4"	11.7
			2"	12.4
HDSGW15-02	1" × 5/16"	15/16"	4"	14.9
			2"	16.1
HDSGW15-03	1-1/4" × 1/4"	15/16"	4"	14.5
			2"	15.1
HDSGW15-04	1-1/4" × 5/16"	15/16"	4"	18.4
			2"	19.6
HDSGW15-05	1-1/2" × 1/4"	15/16"	4"	17.3
			2"	17.9
HDSGW15-06	1-1/2" × 5/16"	15/16"	4"	21.9
			2"	23.1
HDSGW15-07	1-3/4" × 1/4"	15/16"	4"	20.1
			2"	20.7
HDSGW15-08	1-3/4" × 5/16"	15/16"	4"	25.3
			2"	26.8
HDSGW15-09	2" × 1/4"	15/16"	4"	22.8
			2"	23.5
HDSGW15-10	2" × 5/16"	15/16"	4"	28.8
			2"	29.9
HDSGW15-11	2-1/4" × 1/4"	15/16"	4"	25.6
			2"	26.3
HDSGW15-12	2-1/4" × 5/16"	15/16"	4"	32.3
			2"	33.4
HDSGW15-13	2-1/2" × 1/4"	15/16"	4"	28.4
			2"	29.1
HDSGW15-14	2-1/2" × 5/16"	15/16"	4"	35.7
			2"	36.9
HDSGW15-15	2-3/4" × 1/4"	15/16"	4"	31.2
			2"	31.8
HDSGW15-16	2-3/4" × 5/16"	15/16"	4"	39.6
			2"	41.1
HDSGW15-17	3" × 1/4"	15/16"	4"	34.4
			2"	35.5
HDSGW15-18	3" × 5/16"	15/16"	4"	43.1
			2"	44.6

WELDED STEEL GRATING



SPECIFICATION OF W-19 WELDED STEEL GRATING

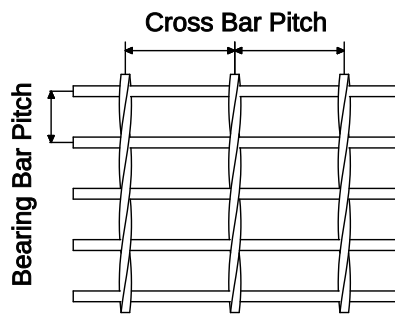
Item	Bearing Bar Size	Bearing Bar Pitch	Cross Bar Pitch	Weight (Lbs./S.F.)
HDSGW19-01	1" x 1/4"	1-3/16"	4"	9.5
			2"	10.1
HDSGW19-02	1" x 5/16"	1-3/16"	4"	12.1
			2"	13.3
HDSGW19-03	1-1/4" x 1/4"	1-3/16"	4"	11.7
			2"	12.3
HDSGW19-04	1-1/4" x 5/16"	1-3/16"	4"	14.3
			2"	16.0
HDSGW19-05	1-1/2" x 1/4"	1-3/16"	4"	13.9
			2"	14.5
HDSGW19-06	1-1/2" x 5/16"	1-3/16"	4"	17.8
			2"	18.8
HDSGW19-07	1-3/4" x 1/4"	1-3/16"	4"	16.1
			2"	16.7
HDSGW19-08	1-3/4" x 5/16"	1-3/16"	4"	20.4
			2"	21.5
HDSGW19-09	2" x 1/4"	1-3/16"	4"	18.3
			2"	18.9
HDSGW19-10	2" x 5/16"	1-3/16"	4"	23.1
			2"	24.6
HDSGW19-11	2-1/4" x 1/4"	1-3/16"	4"	20.5
			2"	21.1
HDSGW19-12	2-1/4" x 5/16"	1-3/16"	4"	25.9
			2"	27.0
HDSGW19-13	2-1/2" x 1/4"	1-3/16"	4"	22.7
			2"	23.3
HDSGW19-14	2-1/2" x 5/16"	1-3/16"	4"	28.6
			2"	29.8
HDSGW19-15	2-3/4" x 1/4"	1-3/16"	4"	24.9
			2"	25.6
HDSGW19-16	2-3/4" x 5/16"	1-3/16"	4"	31.8
			2"	33.3
HDSGW19-17	3" x 1/4"	1-3/16"	4"	27.8
			2"	28.7
HDSGW19-18	3" x 5/16"	1-3/16"	4"	34.5
			2"	36.1



SPECIFICATION OF W-22 WELDED STEEL GRATING

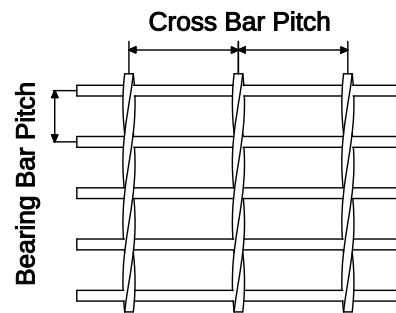
Item	Bearing Bar Size	Bearing Bar Pitch	Cross Bar Pitch	Weight (Lbs./S.F.)
HDSGW22-01	1" x 1/4"	1-3/8"	4"	8.3
			2"	9.0
HDSGW22-02	1" x 5/16"	1-3/8"	4"	10.7
			2"	11.8
HDSGW22-03	1-1/4" x 1/4"	1-3/8"	4"	10.2
			2"	10.9
HDSGW22-04	1-1/4" x 5/16"	1-3/8"	4"	13.1
			2"	14.2
HDSGW22-05	1-1/2" x 1/4"	1-3/8"	4"	12.1
			2"	12.8
HDSGW22-06	1-1/2" x 5/16"	1-3/8"	4"	15.4
			2"	16.8
HDSGW22-07	1-3/4" x 1/4"	1-3/8"	4"	14.0
			2"	14.7
HDSGW22-08	1-3/4" x 5/16"	1-3/8"	4"	17.8
			2"	19.0
HDSGW22-09	2" x 1/4"	1-3/8"	4"	16.0
			2"	16.6
HDSGW22-10	2" x 5/16"	1-3/8"	4"	20.2
			2"	21.3
HDSGW22-11	2-1/4" x 1/4"	1-3/8"	4"	17.9
			2"	18.5
HDSGW22-12	2-1/4" x 5/16"	1-3/8"	4"	22.6
			2"	23.7
HDSGW22-13	2-1/2" x 1/4"	1-3/8"	4"	19.8
			2"	20.4
HDSGW22-14	2-1/2" x 5/16"	1-3/8"	4"	25.0
			2"	26.1
HDSGW22-15	2-3/4" x 1/4"	1-3/8"	4"	21.7
			2"	22.3
HDSGW22-16	2-3/4" x 5/16"	1-3/8"	4"	27.8
			2"	29.3
HDSGW22-17	3" x 1/4"	1-3/8"	4"	24.1
			2"	25.2
HDSGW22-18	3" x 5/16"	1-3/8"	4"	30.2
			2"	31.7

WELDED STEEL GRATING



SPECIFICATION OF W-30 WELDED STEEL GRATING

Item	Bearing Bar Size	Bearing Bar Pitch	Cross Bar Pitch	Weight (Lbs./S.F.)
HDSGW30-01	1" x 1/4"	1-7/8"	4"	6.3
			2"	7.0
HDSGW30-02	1" x 5/16"	1-7/8"	4"	8.2
			2"	9.4
HDSGW30-03	1-1/4" x 1/4"	1-7/8"	4"	7.8
			2"	8.4
HDSGW30-04	1-1/4" x 5/16"	1-7/8"	4"	10.0
			2"	11.1
HDSGW30-05	1-1/2" x 1/4"	1-7/8"	4"	9.2
			2"	9.8
HDSGW30-06	1-1/2" x 5/16"	1-7/8"	4"	11.8
			2"	12.9
HDSGW30-07	1-3/4" x 1/4"	1-7/8"	4"	10.6
			2"	11.3
HDSGW30-08	1-3/4" x 5/16"	1-7/8"	4"	13.6
			2"	14.7
HDSGW30-09	2" x 1/4"	1-7/8"	4"	12.0
			2"	12.7
HDSGW30-10	2" x 5/16"	1-7/8"	4"	15.3
			2"	16.5
HDSGW30-11	2-1/4" x 1/4"	1-7/8"	4"	13.6
			2"	14.1
HDSGW30-12	2-1/4" x 5/16"	1-7/8"	4"	17.1
			2"	18.3
HDSGW30-13	2-1/2" x 1/4"	1-7/8"	4"	14.9
			2"	15.3
HDSGW30-14	2-1/2" x 5/16"	1-7/8"	4"	18.9
			2"	20.0
HDSGW30-15	2-3/4" x 1/4"	1-7/8"	4"	16.3
			2"	17.0
HDSGW30-16	2-3/4" x 5/16"	1-7/8"	4"	21.0
			2"	22.6
HDSGW30-17	3" x 1/4"	1-7/8"	4"	18.2
			2"	19.3
HDSGW30-18	3" x 5/16"	1-7/8"	4"	22.8
			2"	24.4

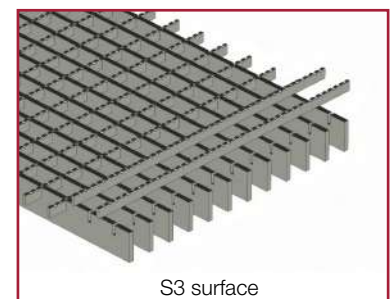
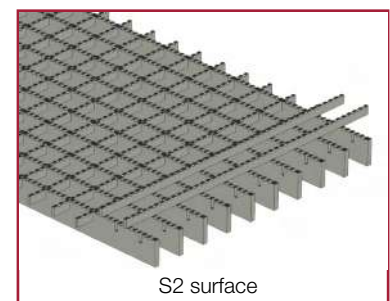
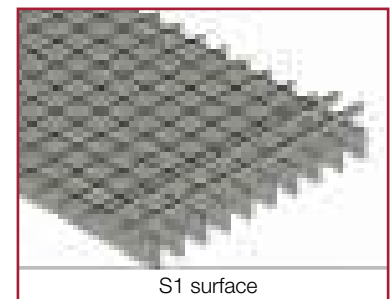
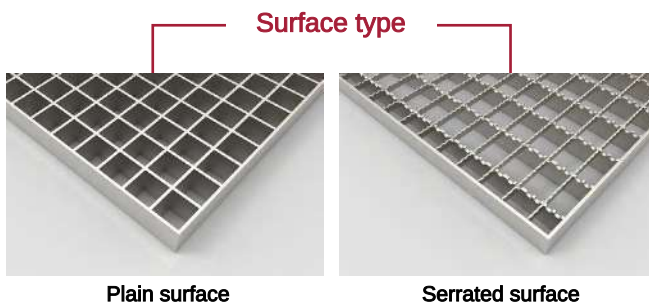
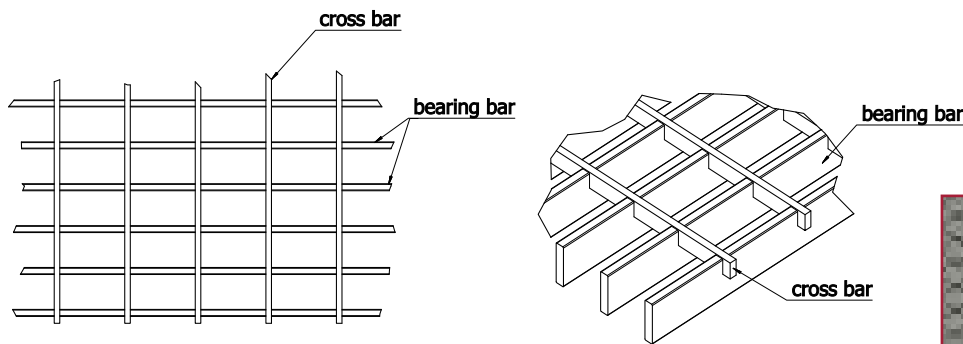


SPECIFICATION OF W-38 WELDED STEEL GRATING

Item	Bearing Bar Size	Bearing Bar Pitch	Cross Bar Pitch	Weight (Lbs./S.F.)
HDSGW38-01	1" x 1/4"	2-3/8"	4"	5.2
			2"	5.9
HDSGW38-02	1" x 5/16"	2-3/8"	4"	6.8
			2"	7.9
HDSGW38-03	1-1/4" x 1/4"	2-3/8"	4"	8.3
			2"	7.0
HDSGW38-04	1-1/4" x 5/16"	2-3/8"	4"	8.2
			2"	9.4
HDSGW38-05	1-1/2" x 1/4"	2-3/8"	4"	7.5
			2"	8.1
HDSGW38-06	1-1/2" x 5/16"	2-3/8"	4"	9.6
			2"	10.8
HDSGW38-07	1-3/4" x 1/4"	2-3/8"	4"	8.6
			2"	9.3
HDSGW38-08	1-3/4" x 5/16"	2-3/8"	4"	11.1
			2"	12.2
HDSGW38-09	2" x 1/4"	2-3/8"	4"	9.8
			2"	10.4
HDSGW38-10	2" x 5/16"	2-3/8"	4"	12.5
			2"	13.6
HDSGW38-11	2-1/4" x 1/4"	2-3/8"	4"	10.9
			2"	11.5
HDSGW38-12	2-1/4" x 5/16"	2-3/8"	4"	13.9
			2"	15.0
HDSGW38-13	2-1/2" x 1/4"	2-3/8"	4"	12.0
			2"	12.7
HDSGW38-14	2-1/2" x 5/16"	2-3/8"	4"	15.3
			2"	16.5
HDSGW38-15	2-3/4" x 1/4"	2-3/8"	4"	13.2
			2"	13.8
HDSGW38-16	2-3/4" x 5/16"	2-3/8"	4"	17.2
			2"	18.7
HDSGW38-17	3" x 1/4"	2-3/8"	4"	14.9
			2"	15.9
HDSGW38-18	3" x 5/16"	2-3/8"	4"	18.6
			2"	20.1

PRESS-LOCKED STEEL GRATING

Press-locked steel grating is a strong and stable steel grid made by locking cross bars with bearing bars under high pressure. It's as durable as welded grating but looks better and is more stable. Made from stainless or low carbon steel, it's resistant to corrosion and has a smooth, even surface that's safe to walk on. Easy to install and remove, this grating is used a lot in buildings for ceilings, in outdoor areas for design, on industrial platforms, and in city structures. It's a popular choice for its strength and low maintenance, fitting well in both industrial and attractive public spaces.



SERRATED SURFACE TYPE

- › **S1:** Trapezoidal teeth on the bearing bar.
- › **S2:** Trapezoidal tooth both on the bearing bar and cross bar with the highest non-slip performance. It is the most popular types among the three types.
- › **S3:** The non-slip tooth is applied to the connect components. It has the lowest non-slip performance.

CATEGORY



Common steel grating



Integral steel grating



Heavy duty steel grating



Louver steel grating

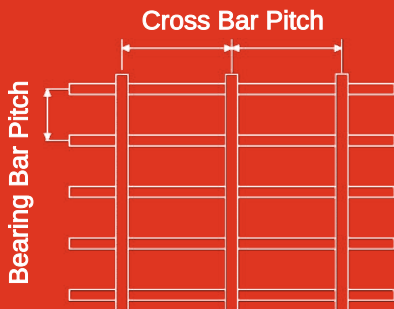
Advantages

- › Light weight, high bearing capability and high strength
- › Non-slip & anti-corrosion performance
- › Not easy to deform
- › Beautiful appearance
- › Easy to install and remove
- › Extended service life

Technical Specifications

- › Material: carbon steel and stainless steel.
- › Surface treatment: galvanized, painted, untreated.
- › Surface type: standard plain surface, serrated surface.
- › Cross bar type: flat cross bar and serrated cross bar.

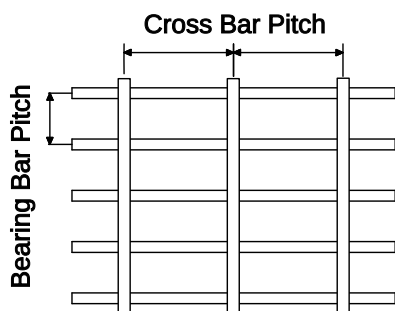
SPECIFICATION OF P-19 PRESS-LOCKED STEEL GRATING



Item	Bearing Bar Size	Bearing Bar Pitch	Cross Bar Pitch	Weight (Lbs./S.F.)
SGP19-01	3/4" × 1/8"	1-3/16"	4"	4.6
			2"	4.9
SGP19-02	3/4" × 3/16"	1-3/16"	4"	6.3
			2"	7.1
SGP19-03	1" × 1/8"	1-3/16"	4"	5.7
			2"	6.0
SGP19-04	1" × 3/16"	1-3/16"	4"	8.0
			2"	8.7
SGP19-05	1-1/4" × 1/8"	1-3/16"	4"	6.8
			2"	7.2
SGP19-06	1-1/4" × 3/16"	1-3/16"	4"	9.6
			2"	10.4
SGP19-07	1-1/2" × 1/8"	1-3/16"	4"	7.9
			2"	8.5
SGP19-08	1-1/2" × 3/16"	1-3/16"	4"	11.2
			2"	12.4
SGP19-09	1-3/4" × 3/16"	1-3/16"	4"	12.9
			2"	14.2
SGP19-10	2" × 3/16"	1-3/16"	4"	14.5
			2"	15.7
SGP19-11	2-1/4" × 3/16"	1-3/16"	4"	16.1
			2"	17.4
SGP19-12	2-1/2" × 3/16"	1-3/16"	4"	17.7
			2"	18.9

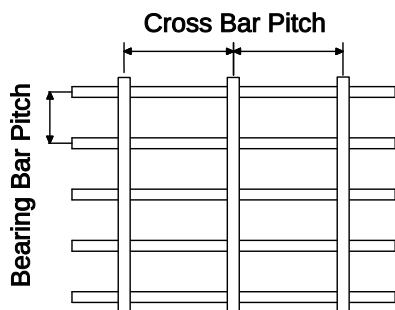
PRESS-LOCKED STEEL GRATING

SPECIFICATION OF **P-15** PRESS-LOCKED STEEL GRATING



Item	Bearing Bar Size	Bearing Bar Pitch	Cross Bar Pitch	Weight (Lbs./S.F.)
SGP15-01	3/4" x 1/8"	15/16"	4"	5.5
			2"	5.5
SGP15-02	3/4" x 3/16"	15/16"	4"	7.5
			2"	7.7
SGP15-03	1" x 1/8"	15/16"	4"	6.9
			2"	7.2
SGP15-04	1" x 3/16"	15/16"	4"	9.8
			2"	10.1
SGP15-05	1-1/4" x 1/8"	15/16"	4"	8.2
			2"	8.7
SGP15-06	1-1/4" x 3/16"	15/16"	4"	11.7
			2"	12.2
SGP15-07	1-1/2" x 1/8"	15/16"	4"	9.6
			2"	10.6
SGP15-08	1-1/2" x 3/16"	15/16"	4"	13.8
			2"	14.8
SGP15-09	1-3/4" x 3/16"	15/16"	4"	15.8
			2"	16.9
SGP15-10	2" x 3/16"	15/16"	4"	17.9
			2"	19.0
SGP15-11	2-1/4" x 3/16"	15/16"	4"	19.9
			2"	21.1
SGP15-12	2-1/2" x 3/16"	15/16"	4"	22.0
			2"	23.2

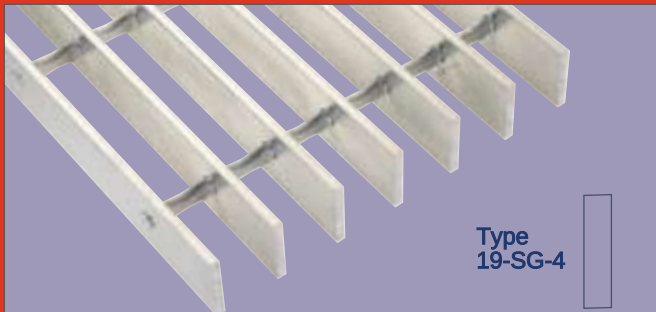
SPECIFICATION OF **P-11** PRESS-LOCKED STEEL GRATING



Item	Bearing Bar Size	Bearing Bar Pitch	Cross Bar Pitch	Weight (Lbs./S.F.)
SGP11-01	3/4" x 1/8"	11/16"	4"	6.6
			2"	7.6
SGP11-02	3/4" x 3/16"	11/16"	4"	9.7
			2"	10.4
SGP11-03	1" x 1/8"	11/16"	4"	8.5
			2"	9.5
SGP11-04	1" x 3/16"	11/16"	4"	12.6
			2"	13.3
SGP11-05	1-1/4" x 1/8"	11/16"	4"	10.4
			2"	11.3
SGP11-06	1-1/4" x 3/16"	11/16"	4"	15.6
			2"	16.2
SGP11-07	1-1/2" x 1/8"	11/16"	4"	12.3
			2"	13.9
SGP11-08	1-1/2" x 3/16"	11/16"	4"	17.7
			2"	19.7
SGP11-09	1-3/4" x 3/16"	11/16"	4"	21.0
			2"	22.7
SGP11-10	2" x 3/16"	11/16"	4"	23.8
			2"	25.7
SGP11-11	2-1/4" x 3/16"	11/16"	4"	26.5
			2"	28.4
SGP11-12	2-1/2" x 3/16"	11/16"	4"	29.4
			2"	31.2

Aluminum Bar Grating

Aluminum Bar Grating is lightweight, corrosion resistant, non-sparking, and has an unmatched strength-to-weight ratio. Manufactured from ASTM B221, 6063, or 6061 alloy, aluminum grating is available in four distinct products: type "SG" Swaged Rectangular Bar, type "SGI" Swaged "I" -bar, type "SGF" Swaged Flush-Top, and type "ADT" Dovetail Pressure Locked. All four products are available with bearing bar spacing ranging from 19/16" (1-3/16") to 7/16" on center and with cross bars at either 4" or 2" on center. Aluminum products are typically shipped "mill finish" with no additional treatment. For architectural applications or highly corrosive environments, supplemental anodizing, chemical cleaning, or powder coat finishes are available. The load tables on pages 14-18 provide detailed specification information relating to all four aluminum products.



Type
19-SG-4

Type "SG" Aluminum Grating

The most widely used aluminum grating, type "SG" rectangular bar, provides clean, crisp lines. Bearing bars are available with standard plain or optional serrated or Algrip surfaces. The cross bars are fully locked within the bearing bar, slightly below the top surface.

Type 19-SG-4 aluminum grating is the industry recognized standard for industrial applications. With nearly 80% open area, 19-SG-4 spacing is virtually self-cleaning, allowing for the easy passage of dirt, debris, snow, and liquids.

Type "SG" gratings are available in close mesh ADA conforming spacings 11-SG-4 and 7-SG-4 which are commonly used in public areas. When specifying type 11-SG-4 for ADA applications, 3/16" thick bearing bars must be designated.



Type
19-SGI-4

Type "SGI" Aluminum Grating

Manufactured with highly efficient "I" shaped extruded bearing bars, type "SGI" aluminum grating carries the same load as 3/16" thick rectangular bar type "SG" aluminum grating.

Advantages include reduced weight per square foot and the striated flanges of the "I" -bar provide enhanced skid resistance without the added cost of serration.

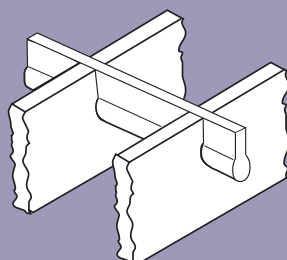


Type "SGF" Swaged Flush-Top Aluminum Grating

Manufactured with a unique, extruded cross bar that is flush with the top surface of the bearing bars, type "SGF" aluminum grating provides an enhanced walking surface for areas subject to continuous pedestrian traffic.

Available in rectangular bar with plain or serrated surfaces, type "SGF" aluminum grating is also available in ADA conforming spacings for applications located in the public way.

Swaged Flush-Top Intersection

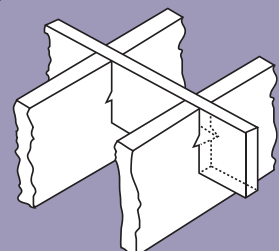


Type "ADT" Aluminum Dovetail Pressure Locked Grating

Type "ADT" aluminum gratings have deep rectangular cross bars and are manufactured by inserting pre-punched bearing bars and cross bars into an "egg-crate" configuration and deforming the cross bars under intense hydraulic pressure.

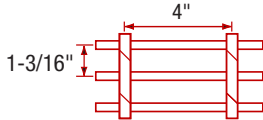
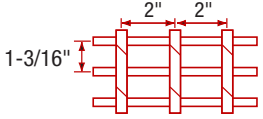
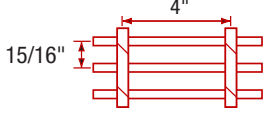
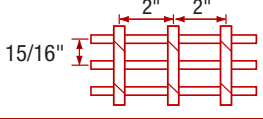
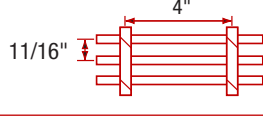
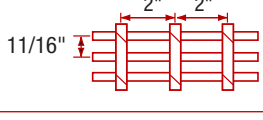
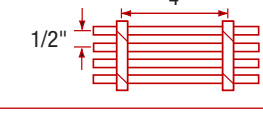
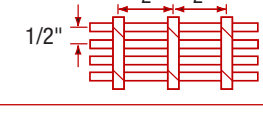
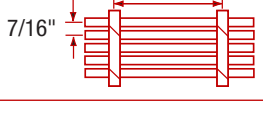
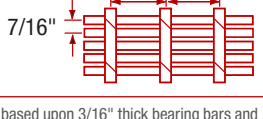
The deep cross bars on type "ADT" gratings make them popular for architectural applications such as sun shades and infill panels with the deeper cross bar serving as a distinct visual accent.

Dovetail Intersection



Aluminum Bar Grating

Aluminum Grating Table of Spacings

Part No.	Spacing	Open Area*	
19-SG-4 19-SGI-4 19-SGF-4 19-ADT-4		78%	Bearing bars spaced at 1-3/16" on center and cross bars at 4" on center. The workhorse of industrial flooring, popular for platforms, catwalks, mezzanines, and stairways.
19-SG-2 19-SGI-2 19-SGF-2 19-ADT-2		73%	Bearing bars spaced at 1-3/16" on center and cross bars at 2" on center. Excellent for short spans and applications where additional lateral stability is desired.
15-SG-4 15-SGI-4 15-SGF-4 15-ADT-4		75%	Bearing bars spaced at 15/16" on center and cross bars at 4" on center. The closer spaced bearing bars increase load capacity by more than 26% when compared to similar gratings produced with bearing bars at 1-3/16" on center.
15-SG-2 15-SGI-2 15-SGF-2 15-ADT-2		69%	Bearing bars spaced at 15/16" on center and cross bars at 2" on center. The closer spaced bearing bars and cross bars provide additional flooring surface to support pedestrian and wheeled traffic.
11-SG-4 11-SGI-4 11-SGF-4 11-ADT-4		68%	Bearing bars spaced at 11/16" on center and cross bars at either 4" or 2" on center. Types 11-4 and 11-2 with 3/16" thick bearing bars comply with the spacing requirements of the Americans with Disabilities Act. For ADA installations, specify that the bearing bars span perpendicular to the normal flow of traffic.
11-SG-2 11-SGI-2 11-SGF-2 11-ADT-2		63%	
8-SG-4 8-SGI-4 8-SGF-4 8-ADT-4		58%	Bearing bars spaced at 1/2" on center and cross bars at 4" or 2" on center. Types 8-4 and 8-2 comply with ADA spacing requirements. These products are popular for material handling platforms and mezzanines subject to continuous cart and dolly traffic.
8-SG-2 8-SGI-2 8-SGF-2 8-ADT-2		54%	
7-SG-4 7-SGI-4 7-SGF-4 7-ADT-4		53%	Bearing bars spaced at 7/16" on center and cross bars at 4" or 2" on center. Types 7-4 and 7-2 comply with ADA spacing requirements and are popular for applications in the public way. When specified with 3/16" thick bearing bars, 7-4 and 7-2 gratings have a net 1/4" clear opening between the bearing bars and commonly reject intrusion by high heeled shoes.
7-SG-2 7-SGI-2 7-SGF-2 7-ADT-2		49%	

* Percentage of open area is based upon 3/16" thick bearing bars and .275" cross bars. Contact Grating Pacific if exact open area calculation is required for alternative bearing bar thicknesses or cross bar sizes.

How to Specify Aluminum Bar Grating

- Select type of grating
 - **"SG"** for swaged rectangular bar grating
 - **"SGI"** for swaged "I"-bar grating
 - **"SGF"** for swaged Flush-Top grating
 - **"ADT"** for aluminum dovetail pressure locked grating
- Select bar spacing from table above
- Select bearing bar size (consult load tables on pages 14-18 considering service loads and clear spans)
- Specify plain, serrated, or Algrip surface
- Specify banding or additional trim required
- Specify finish
 - Mill finish (no finish)
 - Anodized (clear, bronze, other)
 - Powder coating
 - Other
- Specify fasteners (if required) – see page 59

Aluminum Bar Grating

19 Space (1-3/16") Load Table

Use this table when evaluating spans and loads for the following types of aluminum grating:
19-SG-4, 19-SG-2, 19-SGI-4, 19-SGI-2, 19-SGF-4, 19-SGF-2,
19-ADT-4, & 19-ADT-2

Bearing Bar Size (inches)	Approx. Weight psf *	Maximum Pedestrian Span**	Sec. Prop.*** Sx in ³ Ix in ⁴	Unsupported Span											
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0
3/4 x 3/16	1.9	2'-11"	0.178 0.067	U 355	227	158	116								
				D 0.192	0.300	0.432	0.588								
3/4" I-Bar	1.7			C 355	284	237	203								
				D 0.154	0.240	0.346	0.470								
1 x 1/8	1.7	3'-3"	0.211 0.105	U 421	270	187	138	105							
				D 0.144	0.225	0.324	0.441	0.576							
				C 421	337	281	241	211							
				D 0.115	0.180	0.259	0.353	0.461							
1 x 3/16	2.5	3'-8"	0.316 0.158	U 632	404	281	206	158	125						
				D 0.144	0.225	0.324	0.441	0.576	0.729						
1" I-Bar	2.0			C 632	505	421	361	316	281						
				D 0.115	0.180	0.259	0.353	0.461	0.583						
1-1/4 x 1/8	2.1	3'-11"	0.329 0.206	U 658	421	292	215	165	130						
				D 0.115	0.180	0.259	0.353	0.461	0.583						
				C 658	526	439	376	329	292						
				D 0.092	0.144	0.207	0.282	0.369	0.467						
1-1/4 x 3/16	3.1	4'-4"	0.493 0.308	U 987	632	439	322	247	195	158	131	110			
				D 0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037			
1-1/4" I-Bar	2.4			C 987	790	658	564	493	439	395	359	329			
				D 0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829			
1-1/2 x 1/8	2.5	4'-5"	0.474 0.355	U 947	606	421	309	237	187	152	125	105	90	77	59
				D 0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
				C 947	758	632	541	474	421	379	345	316	292	271	237
				D 0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-1/2 x 3/16	3.7	4'-11"	0.711 0.533	U 1,421	910	632	464	355	281	227	188	158	135	116	89
				D 0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
1-1/2" I-Bar	2.7			C 1,421	1,137	947	812	711	632	568	517	474	437	406	355
				D 0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-3/4 x 1/8	2.9	5'-0"	0.645 0.564	U 1,290	825	573	421	322	255	206	171	143	122	105	81
				D 0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
				C 1,290	1,032	860	737	645	573	516	469	430	397	368	322
				D 0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
1-3/4 x 3/16	4.2	5'-6"	0.967 0.846	U 1,934	1,238	860	632	484	382	310	256	215	183	158	121
				D 0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
1-3/4" I-Bar	3.1			C 1,934	1,547	1,290	1,105	967	860	774	703	645	595	553	484
				D 0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
2 x 1/8	3.3	5'-6"	0.842 0.842	U 1,684	1,078	749	550	421	333	270	223	187	160	138	105
				D 0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
				C 1,684	1,347	1,123	962	842	749	674	612	561	518	481	421
				D 0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2 x 3/16	4.8	6'-1"	1.263 1.263	U 2,526	1,617	1,123	825	632	499	404	334	281	239	206	158
				D 0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
2" I-Bar	3.5			C 2,526	2,021	1,684	1,444	1,263	1,123	1,011	919	842	777	722	632
				D 0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2-1/4 x 3/16	5.4	6'-8"	1.599 1.799	U 3,197	2,046	1,421	1,044	799	632	512	423	355	303	261	200
				D 0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.024
2-1/4" I-Bar	3.8			C 3,197	2,558	2,132	1,827	1,599	1,421	1,279	1,163	1,066	984	914	799
				D 0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819
2-1/2 x 3/16	5.9	7'-3"	1.974 2.467	U 3,947	2,526	1,754	1,289	987	780	632	522	439	374	322	247
				D 0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2-1/2" I-Bar	4.2			C 3,947	3,158	2,632	2,256	1,974	1,754	1,579	1,435	1,316	1,215	1,128	987
				D 0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737

* Weight per square foot based upon 19-SG-4 grating. Add .30 psf for 2" on center cross bars. ** Maximum pedestrian load is defined as a 100# uniform load with deflection $\leq 1/4$ inch. (The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.) *** Section properties per foot of width.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will vary from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	1-3/8"	2-9/16"	3-3/4"	4-15/16"	6-1/8"	7-5/16"	8-1/2"	9-11/16"	10-7/8"	12-1/16"	13-1/4"	14-7/16"	15-5/8"	16-13/16"	18"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	19-3/16"	20-3/8"	21-9/16"	22-3/4"	23-15/16"	25-1/8"	26-5/16"	27-1/2"	28-11/16"	29-7/8"	31-1/16"	32-1/4"	33-7/16"	34-5/8"	35-13/16"

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values. Add 1/4" to all dimensions for extended cross bars on all aluminum products.

■ Indicates stock panel widths.

Aluminum Bar Grating

Use this table when evaluating spans and loads for the following types of aluminum grating:

15-SG-4, 15-SG-2, 15-SGI-4, 15-SGI-2, 15-SGF-4, 15-SGF-2, 15-ADT-4, & 15-ADT-2

15 Space (15/16") Load Table

Bearing Bar Size (inches)	Approx. Weight psf *	Maximum Pedestrian Span**	Sec. Prop.*** Sx in ³ Ix in ⁴	Unsupported Span												
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	
3/4 x 3/16	2.4	3'-1"	0.225	U	450	288	200	147	113		All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 12,000 psi.					
3/4" I-Bar	2.0		0.084	D	0.192	0.300	0.432	0.588	0.768							
				C	450	360	300	257	225							
				D	0.154	0.240	0.346	0.470	0.614							
1 x 1/8	2.1	3'-6"	0.267	U	533	341	237	174	133	105	The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.					
			0.133	D	0.144	0.225	0.324	0.441	0.576	0.729						
				C	533	427	356	305	267	237						
				D	0.115	0.180	0.259	0.353	0.461	0.583						
1 x 3/16	3.1	3'-10"	0.400	U	800	512	356	261	200	158	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.					
1" I-Bar	2.5		0.200	D	0.144	0.225	0.324	0.441	0.576	0.729						
				C	800	640	533	457	400	356						
				D	0.115	0.180	0.259	0.353	0.461	0.583						
1-1/4 x 1/8	2.6	4'-1"	0.417	U	833	533	370	272	208	165	133	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/foot of grating width D = deflection in inches				
			0.260	D	0.115	0.180	0.259	0.353	0.461	0.583	0.720					
				C	833	667	556	476	417	370	333					
				D	0.092	0.144	0.207	0.282	0.369	0.467	0.576					
1-1/4 x 3/16	3.8	4'-7"	0.625	U	1,250	800	556	408	313	247	200	165	139			
1-1/4" I-Bar	2.9		0.391	D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037			
				C	1,250	1,000	833	714	625	556	500	455	417			
				D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829			
1-1/2 x 1/8	3.1	4'-8"	0.600	U	1,200	768	533	392	300	237	192	159	133	114	98	75
			0.450	D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
				C	1,200	960	800	686	600	533	480	436	400	369	343	300
				D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-1/2 x 3/16	4.5	5'-3"	0.900	U	1,800	1,152	800	588	450	356	288	238	200	170	147	113
1-1/2" I-Bar	3.4		0.675	D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
				C	1,800	1,440	1,200	1,029	900	800	720	655	600	554	514	450
				D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-3/4 x 1/8	3.6	5'-4"	0.817	U	1,633	1,045	726	533	408	323	261	216	182	155	133	102
			0.715	D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
				C	1,633	1,307	1,089	933	817	726	653	594	544	503	467	408
				D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
1-3/4 x 3/16	5.3	5'-10"	1.225	U	2,450	1,568	1,089	800	613	484	392	324	272	232	200	153
1-3/4" I-Bar	3.8		1.072	D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
				C	2,450	1,960	1,633	1,400	1,225	1,089	980	891	817	754	700	613
				D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
2 x 1/8	4.1	5'-10"	1.067	U	2,133	1,365	948	697	533	421	341	282	237	202	174	133
			1.067	D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
				C	2,133	1,707	1,422	1,219	1,067	948	853	776	711	656	610	533
				D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2 x 3/16	6.0	6'-6"	1.600	U	3,200	2,048	1,422	1,045	800	632	512	423	356	303	261	200
2" I-Bar	4.3		1.600	D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
				C	3,200	2,560	2,133	1,829	1,600	1,422	1,280	1,164	1,067	985	914	800
				D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2-1/4 x 3/16	6.7	7'-1"	2.025	U	4,050	2,592	1,800	1,322	1,013	800	648	536	450	383	331	253
2-1/4" I-Bar	4.7		2.278	D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.024
				C	4,050	3,240	2,700	2,314	2,025	1,800	1,620	1,473	1,350	1,246	1,157	1,013
				D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819
2-1/2 x 3/16	7.4	7'-8"	2.500	U	5,000	3,200	2,222	1,633	1,250	988	800	661	556	473	408	313
2-1/2" I-Bar	5.2		3.125	D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
				C	5,000	4,000	3,333	2,857	2,500	2,222	2,000	1,818	1,667	1,539	1,429	1,250
				D	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737

* Weight per square foot based upon 15-SG-4 grating. Add .30 psf for 2" on center cross bars. ** Maximum pedestrian load is defined as a 100# uniform load with deflection ≤ 1/4 inch. (The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.) *** Section properties per foot of width.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will vary from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	1'-1/8"	2'-1/16"	3"	3'-15/16"	4'-7/8"	5'-13/16"	6'-3/4"	7'-11/16"	8'-5/8"	9'-9/16"	10'-1/2"	11'-7/16"	12'-3/8"	13'-5/16"	14'-1/4"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	15'-3/16"	16'-1/8"	17'-1/16"	18"	18'-15/16"	19'-7/8"	20'-13/16"	21'-3/4"	22'-11/16"	23'-5/8"	24'-9/16"	25'-1/2"	26'-7/16"	27'-3/8"	28'-5/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39							
Panel Width	29'-1/4"	30'-3/16"	31'-1/8"	32'-1/16"	33"	33'-15/16"	34'-7/8"	35'-13/16"							

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values. Add 1/4" to all dimensions for extended cross bars on all aluminum products.

■ Indicates stock panel widths.

Aluminum Bar Grating

11 Space (11/16") Load Table

Use this table when evaluating spans and loads for the following types of aluminum grating:
11-SG-4, 11-SG-2, 11-SGI-4, 11-SGI-2, 11-SGF-4, 11-SGF-2, 11-ADT-4, & 11-ADT-2

Bearing Bar Size (inches)	Approx. Weight psf *	Maximum Pedestrian Span**	Sec. Prop.*** Sx in ³ Ix in ⁴	Unsupported Span												
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	
3/4 x 3/16 3/4" I-Bar	3.2 2.7	3'-4"	0.307 0.115	U D C D	614 0.192 614 0.154	393 0.300 491 0.240	273 0.432 409 0.346	200 0.588 351 0.470	153 0.768 307 0.614	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 12,000 psi.						
1 x 1/8	2.8	3'-9"	0.364 0.182	U D C D	727 0.144 727 0.115	466 0.225 582 0.180	323 0.324 485 0.259	238 0.441 416 0.353	182 0.576 364 0.461	144 0.729 323 0.583	The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.					
				Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.												
				U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches												
1 x 3/16 1" I-Bar	4.1 3.2	4'-2"	0.545 0.273	U D C D	1,091 0.144 1,091 0.115	698 0.225 873 0.180	485 0.324 727 0.259	356 0.441 623 0.353	273 0.576 546 0.461	216 0.729 485 0.583	175 0.900 436 0.720	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.				
1-1/4 x 1/8	3.5	4'-5"	0.568 0.355	U D C D	1,136 0.115 1,136 0.092	727 0.180 909 0.144	505 0.259 758 0.207	371 0.353 649 0.282	284 0.461 568 0.369	225 0.583 505 0.467	182 0.720 455 0.576					
1-1/4 x 3/16 1-1/4" I-Bar	5.1 3.8	4'-11"	0.852 0.533	U D C D	1,705 0.115 1,705 0.092	1,091 0.180 1,364 0.144	758 0.259 1,136 0.207	557 0.353 974 0.282	426 0.461 852 0.369	337 0.583 758 0.467	273 0.720 682 0.576	225 0.871 620 0.697	189 1.037 568 0.829			
1-1/2 x 1/8	4.1	5'-1"	0.818 0.614	U D C D	1,636 0.096 1,636 0.077	1,047 0.150 1,309 0.120	727 0.216 1,091 0.173	534 0.294 935 0.235	409 0.384 818 0.307	323 0.486 727 0.389	262 0.600 655 0.480	216 0.726 595 0.581	182 0.864 546 0.691	155 1.014 504 0.811	134 1.176 468 0.941	102 1.536 409 1.229
1-1/2 x 3/16 1-1/2" I-Bar	6.1 4.4	5'-8"	1.227 0.920	U D C D	2,455 0.096 2,455 0.077	1,571 0.150 1,964 0.120	1,091 0.216 1,636 0.173	802 0.294 1,403 0.235	614 0.384 1,227 0.307	485 0.486 1,091 0.389	393 0.600 982 0.480	325 0.726 818 0.581	273 0.864 755 0.691	232 1.014 701 0.811	200 1.176 701 0.941	153 1.536 614 1.229
1-3/4 x 1/8	4.8	5'-9"	1.144 0.974	U D C D	2,227 0.082 2,227 0.066	1,426 0.129 1,782 0.103	990 0.185 1,485 0.148	727 0.252 1,273 0.202	557 0.329 1,114 0.263	440 0.417 990 0.333	356 0.514 891 0.411	295 0.622 810 0.498	248 0.741 742 0.592	211 0.869 685 0.695	182 1.008 636 0.806	139 1.317 557 1.053
1-3/4 x 3/16 1-3/4" I-Bar	7.1 5.1	6'-4"	1.670 1.462	U D C D	3,341 0.082 3,341 0.066	2,138 0.129 2,673 0.103	1,485 0.185 2,227 0.148	1,091 0.252 1,909 0.202	835 0.329 1,671 0.263	660 0.417 1,485 0.333	535 0.514 1,336 0.411	442 0.622 1,215 0.498	371 0.741 1,114 0.592	316 0.869 1,028 0.695	273 1.008 955 0.806	209 1.317 835 1.053
2 x 1/8	5.4	6'-4"	1.455 1.455	U D C D	2,909 0.072 2,909 0.058	1,862 0.113 2,327 0.090	1,293 0.162 1,939 0.130	950 0.221 1,662 0.176	727 0.288 1,455 0.230	575 0.365 1,293 0.292	466 0.450 1,164 0.360	385 0.545 1,058 0.436	323 0.648 970 0.518	275 0.761 895 0.608	238 0.882 831 0.706	182 1.152 727 0.922
2 x 3/16 2" I-Bar	8.0 5.7	7'-0"	2.182 2.182	U D C D	4,364 0.072 4,364 0.058	2,793 0.113 3,491 0.090	1,939 0.162 2,909 0.130	1,425 0.221 2,494 0.176	1,091 0.288 2,182 0.230	862 0.365 1,939 0.292	698 0.450 1,746 0.360	577 0.545 1,587 0.436	485 0.648 1,455 0.518	413 0.761 1,343 0.608	356 0.882 1,247 0.706	273 1.152 1,091 0.922
2-1/4 x 3/16 2-1/4" I-Bar	9.0 6.3	7'-8"	2.761 3.107	U D C D	5,523 0.064 5,523 0.051	3,535 0.100 4,418 0.080	2,455 0.144 3,682 0.115	1,803 0.196 3,156 0.157	1,381 0.256 2,761 0.205	1,091 0.324 2,455 0.259	884 0.400 2,209 0.320	730 0.484 2,008 0.387	614 0.576 1,841 0.461	523 0.676 1,699 0.541	451 0.784 1,578 0.627	345 1.024 1,381 0.819
2-1/2 x 3/16 2-1/2" I-Bar	10.0 6.9	8'-4"	3.409 4.261	U D C D	6,818 0.058 6,818 0.046	4,364 0.090 5,455 0.072	3,030 0.130 4,546 0.104	2,226 0.176 3,896 0.141	1,705 0.230 3,409 0.184	1,347 0.292 3,030 0.233	1,091 0.360 2,727 0.288	902 0.436 2,479 0.348	758 0.518 2,273 0.415	646 0.608 2,098 0.487	557 0.706 1,948 0.564	426 0.922 1,705 0.737

* Weight per square foot based upon 11-SG-4 grating. Add .30 psf for 2" on center cross bars. ** Maximum pedestrian load is defined as a 100# uniform load with deflection $\leq 1/4$ inch. (The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.) *** Section properties per foot of width.
Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will vary from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	7/8"	1-9/16"	2-1/4"	2-5/16"	3-5/8"	4-5/16"	5"	5-11/16"	6-3/8"	7-1/16"	7-3/4"	8-7/16"	9-1/8"	9-13/16"	10-1/2"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	11-3/16"	11-7/8"	12-9/16"	13-1/4"	13-15/16"	14-5/8"	15-5/16"	16"	16-11/16"	17-3/8"	18-1/16"	18-3/4"	19-7/16"	20-1/8"	20-13/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	21-1/2"	22-3/16"	22-7/8"	23-9/16"	24-1/4"	24-15/16"	25-5/8"	26-5/16"	27"	27-11/16"	28-3/8"	29-1/16"	29-3/4"	30-7/16"	31-1/8"
Number of Bearing Bars	47	48	49	50	51	52	53								
Panel Width	31-13/16"	32-1/2"	33-3/16"	33-7/8"	34-9/16"	35-1/4"	35-15/16"								

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values. Add 1/4" to all dimensions for extended cross bars on all aluminum products.

■ Indicates stock panel widths.

Aluminum Bar Grating

Use this table when evaluating spans and loads for the following types of aluminum grating:

8-SG-4, 8-SG-2, 8-SGI-4, 8-SGI-2, 8-SGF-4, 8-SGF-2, 8-ADT-4, & 8-ADT-2

8 Space (1/2") Load Table

Bearing Bar Size (inches)	Approx. Weight psf *	Maximum Pedestrian Span**	Sec. Prop.*** Sx in ³ lx in ⁴	Unsupported Span											
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0
3/4 x 3/16 3/4" I-Bar	4.3 3.4	3'-7"	0.422 0.158	U 844	540	375	276	211	167	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 12,000 psi.					
				D 0.192	0.300	0.432	0.588	0.768	0.972						
				C 844	675	563	482	422	375						
1 x 1/8	3.8	4'-1"	0.500 0.250	D 0.154	0.240	0.346	0.470	0.614	0.778	The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.					
				U 1,000	640	444	327	250	198						
				D 0.144	0.225	0.324	0.441	0.576	0.729						
1 x 3/16 1" I-Bar	5.6 4.3	4'-6"	0.750 0.375	C 1,000	800	667	571	500	444	198 1.089	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.				
				D 0.115	0.180	0.259	0.353	0.461	0.583						
				U 1,500	960	667	490	375	296						
1-1/4 x 1/8	4.7	4'-10"	0.781 0.488	D 0.144	0.225	0.324	0.441	0.576	0.729	198 1.089	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.				
				C 1,563	1,250	1,042	893	781	694						
				D 0.092	0.144	0.207	0.282	0.369	0.467						
1-1/4 x 3/16 1-1/4" I-Bar	7.0 5.2	5'-4"	1.172 0.732	U 2,344	1,500	1,042	765	586	463	198 1.089	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.				
				D 0.115	0.180	0.259	0.353	0.461	0.583						
				C 2,344	1,875	1,563	1,339	1,172	1,042						
1-1/2 x 1/8	5.6	5'-6"	1.125 0.844	D 0.092	0.144	0.207	0.282	0.369	0.467	198 1.089	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.				
				U 2,250	1,440	1,000	735	563	444						
				D 0.096	0.150	0.216	0.294	0.384	0.486						
1-1/2 x 3/16 1-1/2" I-Bar	8.3 6.0	6'-1"	1.688 1.266	C 2,250	1,800	1,500	1,286	1,125	1,000	198 1.089	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.				
				D 0.077	0.120	0.173	0.235	0.307	0.389						
				U 3,375	2,160	1,500	1,102	844	667						
1-3/4 x 1/8	6.5	6'-2"	1.531 1.340	D 0.096	0.150	0.216	0.294	0.384	0.486	198 1.089	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.				
				C 3,063	2,450	2,042	1,750	1,531	1,361						
				D 0.066	0.103	0.148	0.202	0.263	0.333						
1-3/4 x 3/16 1-3/4" I-Bar	9.6 6.8	6'-10"	2.297 2.010	U 4,594	2,940	2,042	1,500	1,148	907	198 1.089	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.				
				D 0.082	0.129	0.185	0.252	0.329	0.417						
				C 4,594	3,675	3,063	2,625	2,297	2,042						
2 x 1/8	7.4	6'-10"	2.000 2.000	D 0.066	0.103	0.148	0.202	0.263	0.333	198 1.089	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.				
				U 4,000	2,560	1,778	1,306	1,000	790						
				D 0.072	0.113	0.162	0.221	0.288	0.365						
2 x 3/16 2" I-Bar	11.0 7.7	7'-7"	3.000 3.000	C 4,000	3,200	2,667	2,286	2,000	1,778	198 1.089	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.				
				D 0.058	0.090	0.130	0.176	0.230	0.292						
				U 6,000	3,840	2,667	1,959	1,500	1,185						
2-1/4 x 3/16 2-1/4" I-Bar	12.3 8.5	8'-4"	3.797 4.271	D 0.072	0.113	0.162	0.221	0.288	0.365	198 1.089	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.				
				C 6,000	4,800	4,000	3,429	3,000	2,667						
				D 0.058	0.090	0.130	0.176	0.230	0.292						
2-1/2 x 3/16 2-1/2" I-Bar	13.7 9.5	9'-0"	4.688 5.859	U 7,594	4,860	3,375	2,480	1,898	1,500	198 1.089	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.				
				D 0.064	0.100	0.144	0.196	0.256	0.324						
				C 7,594	6,075	5,063	4,339	3,797	3,375						

* Weight per square foot based upon 8-SG-4 grating. Add .30 psf for 2" on center cross bars. ** Maximum pedestrian load is defined as a 100# uniform load with deflection ≤ 1/4 inch. (The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.) *** Section properties per foot of width.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will vary from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	11-1/16"	1-3/16"	1-11/16"	2-3/16"	2-11/16"	3-3/16"	3-11/16"	4-3/16"	4-11/16"	5-3/16"	5-11/16"	6-3/16"	6-11/16"	7-3/16"	7-11/16"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	8-3/16"	8-11/16"	9-3/16"	9-11/16"	10-3/16"	10-11/16"	11-3/16"	11-11/16"	12-3/16"	12-11/16"	13-3/16"	13-11/16"	14-3/16"	14-11/16"	15-3/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	15-11/16"	16-3/16"	16-11/16"	17-3/16"	17-11/16"	18-3/16"	18-11/16"	19-3/16"	19-11/16"	20-3/16"	20-11/16"	21-3/16"	21-11/16"	22-3/16"	22-11/16"
Number of Bearing Bars	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Panel Width	23-3/16"	23-11/16"	24-3/16"	24-11/16"	25-3/16"	25-11/16"	26-3/16"	26-11/16"	27-3/16"	27-11/16"	28-3/16"	28-11/16"	29-3/16"	29-11/16"	30-3/16"
Number of Bearing Bars	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
Panel Width	30-11/16"	31-3/16"	31-11/16"	32-3/16"	32-11/16"	33-3/16"	33-11/16"	34-3/16"	34-11/16"	35-3/16"	35-11/16"	36-3/16"	36-11/16"	37-3/16"	37-11/16"

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values. Add 1/4" to all dimensions for extended cross bars on all aluminum products.

Indicates stock panel widths.

Aluminum Bar Grating

7 Space (7/16") Load Table

Use this table when evaluating spans and loads for the following types of aluminum grating:
7-SG-4, 7-SG-2, 7-SGI-4, 7-SGI-2, 7-SGF-4, 7-SGF-2, 7-ADT-4, & 7-ADT-2

Bearing Bar Size (inches)	Approx. Weight psf *	Maximum Pedestrian Span**	Sec. Prop.*** Sx in ³ Ix in ⁴	Unsupported Span											
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0
3/4 x 3/16	4.8	3'-9"	0.482	U 964	617	429	315	241	191	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 12,000 psi.					
3/4" I-Bar	3.8		0.181	D 0.192	0.300	0.432	0.588	0.768	0.972						
				C 964	771	643	551	482	429						
				D 0.154	0.240	0.346	0.470	0.614	0.778						
1 x 1/8	4.3	4'-2"	0.571	U 1,143	731	508	373	286	226	183	The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.				
			0.286	D 0.144	0.225	0.324	0.441	0.576	0.729	0.900					
				C 1,143	914	762	653	571	508	457					
				D 0.115	0.180	0.259	0.353	0.461	0.583	0.720					
1 x 3/16	6.3	4'-8"	0.857	U 1,714	1,097	762	560	429	339	274	Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.				
0.429	D 0.144		0.225	0.324	0.441	0.576	0.729	0.900							
	C 1,714		1,371	1,143	980	857	762	686							
	D 0.115		0.180	0.259	0.353	0.461	0.583	0.720							
1-1/4 x 1/8	5.3	4'-11"	0.893	U 1,786	1,143	794	583	446	353	286	236	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches			
			0.558	D 0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871				
				C 1,786	1,429	1,191	1,020	893	794	714	649				
				D 0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697				
1-1/4 x 3/16	7.9	5'-6"	1.339	U 2,679	1,714	1,191	875	670	529	429	354	298	254	241	
1-1/4" I-Bar	5.8		0.837	D 0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037	1.217		
				C 2,679	2,143	1,786	1,531	1,339	1,191	1,071	974	893	824		
				D 0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829	0.973		
1-1/2 x 1/8	6.3	5'-8"	1.286	U 2,571	1,646	1,143	840	643	508	411	340	286	243	210	161
			0.964	D 0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
				C 2,571	2,057	1,714	1,469	1,286	1,143	1,029	935	857	791	735	643
				D 0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-1/2 x 3/16	9.4	6'-4"	1.929	U 3,857	2,469	1,714	1,260	964	762	617	510	429	365	315	241
1-1/2" I-Bar	6.8		1.446	D 0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
				C 3,857	3,086	2,571	2,204	1,929	1,714	1,543	1,403	1,286	1,187	1,102	964
				D 0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-3/4 x 1/8	7.4	6'-5"	1.750	U 3,500	2,240	1,556	1,143	875	691	560	463	389	331	286	219
			1.531	D 0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
				C 3,500	2,800	2,333	2,000	1,750	1,556	1,400	1,273	1,167	1,077	1,000	875
				D 0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
1-3/4 x 3/16	10.9	7'-1"	2.625	U 5,250	3,360	2,333	1,714	1,313	1,037	840	694	583	497	429	328
1-3/4" I-Bar	7.7		2.297	D 0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
				C 5,250	4,200	3,500	3,000	2,625	2,333	2,100	1,909	1,750	1,615	1,500	1,313
				D 0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
2 x 1/8	8.4	7'-1"	2.286	U 4,571	2,926	2,032	1,493	1,143	903	731	605	508	433	373	286
			2.286	D 0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
				C 4,571	3,657	3,048	2,612	2,286	2,032	1,829	1,662	1,524	1,407	1,306	1,143
				D 0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2 x 3/16	12.5	7'-10"	3.429	U 6,857	4,389	3,048	2,239	1,714	1,355	1,097	907	762	649	560	429
2" I-Bar	8.7		3.429	D 0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
				C 6,857	5,486	4,571	3,918	3,429	3,048	2,743	2,494	2,286	2,110	1,959	1,714
				D 0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2-1/4 x 3/16	14.0	8'-7"	4.339	U 8,679	5,554	3,857	2,834	2,170	1,714	1,389	1,148	964	822	709	542
2-1/4" I-Bar	9.6		4.882	D 0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.024
				C 8,679	6,943	5,786	4,959	4,339	3,857	3,471	3,156	2,893	2,670	2,480	2,170
				D 0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819
2-1/2 x 3/16	15.5	9'-3"	5.357	U 10,714	6,857	4,762	3,499	2,679	2,116	1,714	1,417	1,191	1,014	875	670
2-1/2" I-Bar	10.7		6.696	D 0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
				C 10,714	8,571	7,143	6,122	5,357	4,762	4,286	3,896	3,571	3,297	3,061	2,679
				D 0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737

* Weight per square foot based upon 7-SG-4 grating. Add .30 psf for 2" on center cross bars. ** Maximum pedestrian load is defined as a 100# uniform load with deflection ≤ 1/4 inch. (The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.) *** Section properties per foot of width.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will vary from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	5/8"	1-1/16"	1-1/2"	1-15/16"	2-3/8"	2-13/16"	3-1/4"	3-11/16"	4-1/8"	4-9/16"	5"	5-7/16"	5-7/8"	6-5/16"	6-3/4"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	7-3/16"	7-5/8"	8-1/16"	8-1/2"	8-15/16"	9-3/8"	9-13/16"	10-1/4"	10-11/16"	11-1/8"	11-9/16"	12"	12-7/16"	12-7/8"	13-5/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	13-3/4"	14-3/16"	14-5/8"	15-1/16"	15-1/2"	15-15/16"	16-3/8"	16-13/16"	17-1/4"	17-11/16"	18-1/8"	18-9/16"	19"	19-7/16"	19-7/8"
Number of Bearing Bars	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Panel Width	20-5/16"	20-3/4"	21-3/16"	21-5/8"	22-1/16"	22-1/2"	22-15/16"	23-3/8"	23-13/16"	24-1/4"	24-11/16"	25-1/8"	25-9/16"	26"	26-7/16"
Number of Bearing Bars	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
Panel Width	26-7/8"	27-5/16"	27-3/4"	28-3/16"	28-5/8"	29-1/16"	29-1/2"	29-15/16"	30-3/8"	30-13/16"	31-1/4"	31-11/16"	32-1/8"	32-9/16"	33"
Number of Bearing Bars	77	78	79	80	81	82	83								
Panel Width	33-7/16"	33-7/8"	34-5/16"	34-3/4"	35-3/16"	35-5/8"	36-1/16"								

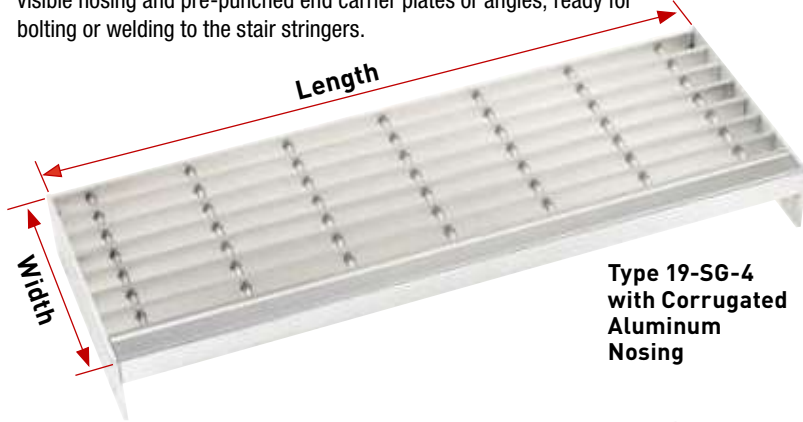
Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values. Add 1/4" to all dimensions for extended cross bars on all aluminum products.

■ Indicates stock panel widths.

Aluminum Bar Grating

Aluminum Stair Treads

Aluminum stair treads are available fabricated to any size in types "SG" and "SGI" swage locked, type "ADT" aluminum dovetail pressure locked, or type "SGF" aluminum flush-top grating. Treads are manufactured with a defined visible nosing and pre-punched end carrier plates or angles, ready for bolting or welding to the stair stringers.



**Type 19-SG-4
with Corrugated
Aluminum
Nosing**

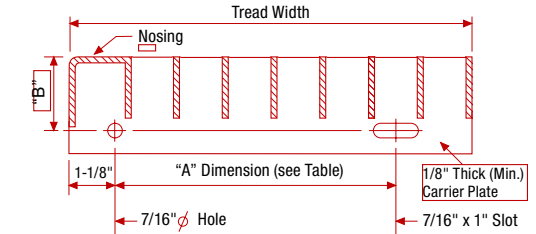


**Type 7-SG-4
with Cast
Abrasive Nosing**

Aluminum Carrier Plates & Angles

Aluminum Carrier Plates

Recommended for use with 19, 15, and 11 spaced gratings

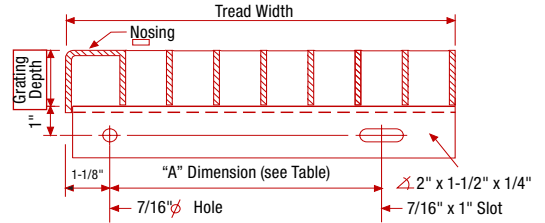


"B" Dimension

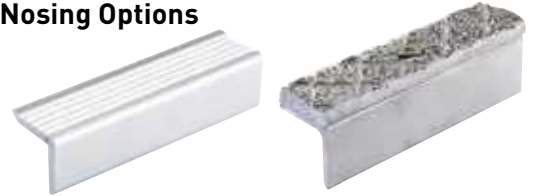
2-1/4" for 1" thru 1-3/4" bearing bars
3-1/4" for 2" thru 2-1/2" bearing bars

Aluminum Carrier Angles

Recommended for use with 8 and 7 spaced gratings



Nosing Options



Corrugated aluminum
nosing welded to grating
and carrier plates/angles.

Cast abrasive nosing
mechanically fastened to
welded mounting angle.

Table of Stair Tread Widths

19 Space			15 Space			11 Space			8 Space			7 Space		
Bearing Bars @ 1-3/16" O.C.			Bearing Bars @ 15/16" O.C.			Bearing Bars @ 11/16" O.C.			Bearing Bars @ 1/2" O.C.			Bearing Bars @ 7/16" O.C.		
Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension
6-1/4"	5	2-1/2"	7"	7	4-1/2"	6-1/4"	8	2-1/2"	6-1/2"	11	2-1/2"	6-3/4"	13	2-1/2"
7-3/8"	6	4-1/2"	8"	8	4-1/2"	7-5/8"	10	4-1/2"	7-1/2"	13	4-1/2"	7-5/8"	15	4-1/2"
8-1/2"	7	4-1/2"	8-7/8"	9	4-1/2"	9"	12	4-1/2"	9"	16	4-1/2"	8-1/2"	17	4-1/2"
9-3/4"	8	7"	9-7/8"	10	7"	10-3/8"	14	7"	10"	18	7"	10-1/8"	21	7"
11"	9	7"	10-3/4"	11	7"	11"	15	7"	11"	20	7"	11-1/8"	23	7"
12-1/8"	10	7"	11-5/8"	12	7"	11-3/4"	16	7"	12"	22	7"	12"	25	7"

Recommended Maximum Aluminum Stair Tread Lengths*

Bearing Bar Size	19 Space		15 Space		11 Space		8 Space		7 Space	
	1-3/16" O.C.		15/16" O.C.		11/16" O.C.		1/2" O.C.		7/16" O.C.	
	Plain	Serrated	Plain	Serrated	Plain	Serrated	Plain	Serrated	Plain	Serrated
1" x 3/16" or 1" I-Bar	2'-4"	2'-2"	2'-6"	2'-3"	2'-8"	2'-4"	3'-0"	2'-8"	3'-2"	2'-9"
1-1/4" x 3/16" or 1-1/4" I-Bar	2'-10"	2'-7"	3'-1"	2'-9"	3'-4"	3'-0"	3'-11"	3'-5"	4'-1"	3'-7"
Bar1-1/2" x 3/16" or 1-1/2" I-Bar	3'-6"	3'-2"	3'-10"	3'-5"	4'-2"	3'-9"	4'-11"	4'-5"	5'-2"	4'-7"
Bar1-3/4" x 3/16" or 1-3/4" I-Bar	4'-3"	3'-10"	4'-8"	4'-3"	5'-1"	4'-7"	5'-6"	5'-6"	5'-6"	5'-6"
2" x 3/16" or 2" I-Bar	5'-1"	4'-8"	5'-6"	5'-1"	5'-6"	5'-6"	5'-6"	5'-6"	5'-6"	5'-6"
2-1/2" x 3/16" or 2-1/2" I-Bar	5'-6"	5'-6"	5'-6"	5'-6"	5'-6"	5'-6"	5'-10"	5'-6"	6'-1"	5'-9"
2-1/2" x 3/16" or 2-1/2" I-Bar	5'-6"	5'-6"	5'-7"	5'-6"	5'-11"	5'-7"	6'-5"	6'-2"	6'-8"	6'-4"

* For treads up to 5'-6", maximum tread lengths are based upon 300 lb. concentrated load on the front 5 inches of the tread, at the center of the tread length. When treads exceed 5'-6" in length, design allows for 300 lb. concentrated loads at 1/3 points of tread length. Deflection is limited to the lesser of .250" or 1/240 of tread length in all cases.

Stainless Steel Bar Grating

Stainless Steel Bar Grating is manufactured from alloy types 304, 304L, 316, or 316L and available in grating types “WS” (welded stainless), “DTS” (dovetail stainless pressure locked), and “SLS” (swage locked stainless). Popular for highly corrosive environments and long-lasting architectural applications, stainless steel bar gratings are available with bearing bar spacing ranging from 19/16" (1-3/16") to 7/16" on center and with cross bars at 4" or 2" on center. Each product is available with standard plain or optional serrated or Algrip surfaces. Finish options are diverse and should be carefully considered.

Type “WS” Welded Stainless Steel Grating

Our strongest and most economical stainless product, type “WS” gratings are manufactured by forge welding rectangular bearing bars and drawn cross bars. This welding process provides a positive fused intersection providing years of service under the most demanding conditions.

Type “WS” stainless gratings are available in “19 space” (1-3/16"), “15 space” (15/16") and “11 space” (11/16") bearing bar centers. Standard cross bar spacing is 4" on center and the optional 2" cross bar spacing is also available.



Type
19-WS-4



Type “DTS” Dovetail Pressure Locked Stainless

Manufactured with a deep rectangular cross

bar, type “DTS” dovetail stainless grating is commonly preferred for architectural applications. Sunscreens, grilles and infill panels are just some of the applications where this distinct “egg-crate” configuration is the ideal accent.

Type “DTS” stainless gratings are available with bearing bar spacings ranging from 19/16" (1-3/16") to 7/16" on center.

For applications where increased bearing bar spacing is desired, consider the architectural products presented on page 57 of this catalog.

Type “SLS” Swage Locked Stainless

Hollow tube cross bars are hydraulically swaged into pre-punched holes in the bearing bars to make type “SLS” swage locked stainless grating. This type of construction provides a secure bearing bar/cross bar intersection and products are available with bearing bar spacings ranging from 19/16" (1-3/16") to 7/16" on center.

This attractive grating, with the swaged cross bars slightly below the top surface of the grating, is very popular for “close-mesh”, ADA conforming applications. Consider “11 space” or “7 space” gratings for vault covers or entrance mats located in the public way.



Stainless Steel Finishes

As produced, stainless steel products typically display discoloration caused by the introduction of heat during welding, cutting, or grinding processes. If appearance is important to your application, consideration should be given to secondary cleaning or electro-polishing.



Mill Finish – Products will display discoloration from welding, cutting, and grinding. Satisfactory for industrial or process applications where appearance is not a consideration.



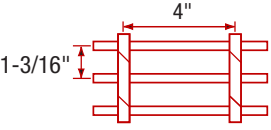
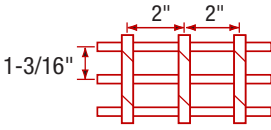
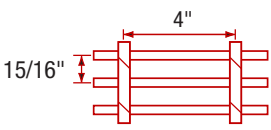
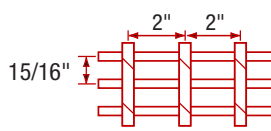
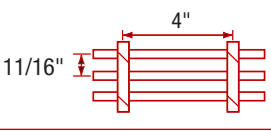
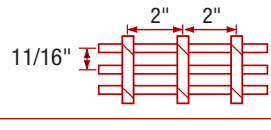
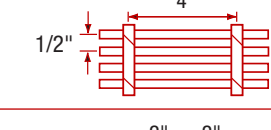
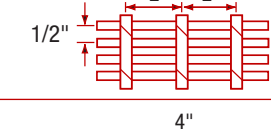
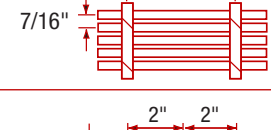
Commercial Clean – A uniform, matte finish is achieved by abrasive blasting followed by passivation to remove manufacturing contaminants.



Electro-Polished – A bright, chrome-like appearance achieved by immersion in chemicals that clean and “polish” the base metal.

Stainless Steel Bar Grating

Stainless Steel Grating Table of Spacings

Part No.	Spacing	Open Area*	
19-WS-4 19-DTS-4 19-SLS-4		78%	Bearing bars spaced at 1-3/16" on center and cross bars at 4" on center. The workhorse of industrial flooring, popular for platforms, catwalks, mezzanines and stairways.
19-WS-2 19-DTS-2 19-SLS-2		73%	Bearing bars spaced at 1-3/16" on center and cross bars at 2" on center. Excellent for short spans and applications where small wheeled carts continuously cross the grating surface.
15-WS-4 15-DTS-4 15-SLS-4		75%	Bearing bars spaced at 15/16" on center and cross bars at 4" on center. The closer spaced bearing bars increase load capacity by more than 26% when compared to similar gratings produced with bearing bars a 1-3/16" on center.
15-WS-2 15-DTS-2 15-SLS-2		69%	Bearing bars spaced at 15/16" on center and close spaced cross bars at 2" on center. The closer spaced bearing bars and cross bars provide additional flooring surface to support pedestrian and wheeled traffic.
11-WS-4 11-DTS-4 11-SLS-4		68%	Bearing bars spaced at 11/16" on center and cross bars at either 4" or 2" on center. Types 11-4 and 11-2 with 3/16" thick bearing bars comply with the spacing requirements of the Americans with Disabilities Act. For ADA installations, specify that the bearing bars span perpendicular to the normal flow of traffic.
11-WS-2 11-DTS-2 11-SLS-2		63%	
8-DTS-4 8-SLS-4		58%	Bearing bars spaced at 1/2" on center and cross bars at 4" or 2" on center. Types 8-4 and 8-2 comply with ADA spacing requirements. These products are popular for material handling platforms and mezzanines subject to continuous cart and dolly traffic.
8-DTS-2 8-SLS-2		54%	
7-DTS-4 7-SLS-4		53%	Bearing bars spaced at 7/16" on center and cross bars at 4" or 2" on center. Types 7-4 and 7-2 comply with ADA spacing requirements and are popular for applications in the public way. When specified with 3/16" thick bearing bars, 7-4 and 7-2 gratings have a net 1/4" clear opening between the bearing bars and commonly reject intrusion by high heeled shoes.
7-DTS-2 7-SLS-2		49%	

* Percentage of open area is based upon 3/16" thick bearing bars and .275" cross bars. Contact Grating Pacific if exact open area calculation is required for alternative bearing bar thicknesses or cross bar sizes.

How to Specify Stainless Steel Bar Grating

- Select type of grating
 - "WS" for welded stainless steel grating
 - "DTS" for dovetail pressure locked stainless steel grating
 - "SLS" for swage locked stainless steel grating
- Select bar spacing from table above
- Select bearing bar size (consult load tables on pages 24-28 considering service loads and clear spans)

- Specify plain, serrated, or Algrip surface
- Specify banding or additional trim required
- Specify finish
 - Mill finish
 - Abrasive blast
 - Commercial clean
 - Electro-polished
- Specify fasteners (if required) – see page 59

Stainless Steel Bar Grating

19 Space

(1-3/16") Load Table Use this table when evaluating spans and loads for the following types of stainless steel grating: 19-WS-4, 19-WS-2, 19-DTS-4, 19-DTS-2, 19-SLS-4, & 19-SLS-2

Bearing Bar Size (inches)	Approx. Weight psf *	Max. Ped. Span**	Sec. Prop.*** Sx in ³ lx in ⁴	Unsupported Span													
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0	
3/4 x 1/8	3.9	3'-5"	0.118 0.044	U	395	253	175	129	99	78	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 20,000 psi.						
				D	0.114	0.179	0.257	0.350	0.457	0.579							
				C	395	316	263	226	197	175							
				D	0.091	0.143	0.206	0.280	0.366	0.463							
3/4 x 3/16	5.6	3'-9"	0.178 0.067	U	592	379	263	193	148	117	95	The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.					
				D	0.114	0.179	0.257	0.350	0.457	0.579	0.714						
				C	592	474	395	338	296	263	237						
				D	0.091	0.143	0.206	0.280	0.366	0.463	0.571						
1 x 1/8	5.0	4'-3"	0.211 0.105	U	702	449	312	229	175	139	112	93	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches				
				D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648					
				C	702	561	468	401	351	312	281	255					
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519					
1 x 3/16	7.2	4'-8"	0.316 0.158	U	1,053	674	468	344	263	208	168	139	117				
				D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648	0.771				
				C	1,053	842	702	602	526	468	421	383	351				
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617				
1-1/4 x 1/8	6.1	5'-0"	0.329 0.206	U	1,097	702	487	358	274	217	175	145	122	104			
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724			
				C	1,097	877	731	627	548	487	439	399	366	337			
				D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579			
1-1/4 x 3/16	8.9	5'-6"	0.493 0.308	U	1,645	1,053	731	537	411	325	263	218	183	156	134		
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724	0.840		
				C	1,645	1,316	1,097	940	822	731	658	598	548	506	470		
				D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579	0.672		
1-1/2 x 1/8	7.2	5'-9"	0.474 0.355	U	1,579	1,011	702	516	395	312	253	209	175	150	129		
				D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700		
				C	1,579	1,263	1,053	902	790	702	632	574	526	486	451		
				D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560		
1-1/2 x 3/16	10.7	6'-4"	0.711 0.533	U	2,368	1,516	1,053	773	592	468	379	313	263	224	193	148	
				D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914	
				C	2,368	1,895	1,579	1,353	1,184	1,053	947	861	790	729	677	592	
				D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731	
1-3/4 x 1/8	8.5	6'-5"	0.645 0.564	U	2,149	1,375	955	702	537	425	344	284	239	204	175	134	106
				D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992
				C	2,149	1,719	1,433	1,228	1,075	955	860	782	716	661	614	537	478
				D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793
1-3/4 x 3/16	12.3	7'-2"	0.967 0.846	U	3,224	2,063	1,433	1,053	806	637	516	426	358	305	263	202	159
				D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992
				C	3,224	2,579	2,149	1,842	1,612	1,433	1,290	1,172	1,075	992	921	806	716
				D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793
2 x 1/8	9.6	7'-1"	0.842 0.842	U	2,807	1,797	1,248	917	702	555	449	371	312	266	229	175	139
				D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868
				C	2,807	2,246	1,871	1,604	1,404	1,248	1,123	1,021	936	864	802	702	624
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
2 x 3/16	13.9	7'-11"	1.263 1.263	U	4,211	2,695	1,871	1,375	1,053	832	674	557	468	399	344	263	208
				D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868
				C	4,211	3,368	2,807	2,406	2,105	1,871	1,684	1,531	1,404	1,296	1,203	1,053	936
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
2-1/4 x 3/16	15.6	8'-8"	1.599 1.799	U	5,329	3,411	2,368	1,740	1,332	1,053	853	705	592	505	435	333	263
				D	0.038	0.060	0.086	0.117	0.152	0.193	0.238	0.288	0.343	0.402	0.467	0.610	0.771
				C	5,329	4,263	3,553	3,045	2,665	2,368	2,132	1,938	1,776	1,640	1,523	1,332	1,184
				D	0.030	0.048	0.069	0.093	0.122	0.154	0.190	0.230	0.274	0.322	0.373	0.488	0.617
2-1/2 x 3/16	17.2	9'-4"	1.974 2.467	U	6,579	4,211	2,924	2,148	1,645	1,300	1,053	870	731	623	537	411	325
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
				C	6,579	5,263	4,386	3,759	3,290	2,924	2,632	2,392	2,193	2,024	1,880	1,645	1,462
				D	0.027	0.043	0.062	0.084	0.110	0.139	0.171	0.207	0.247	0.290	0.336	0.439	0.555

* Weight per square foot based upon 19-WS-4 grating. Add .60 psf for 2" on center cross bars. ** Maximum pedestrian load is defined as a 100# uniform load with deflection $\leq 1/4$ inch. (The $1/4$ " maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.) *** Section properties per foot of width.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be $1/4$ " greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will vary from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	1-3/8"	2-9/16"	3-3/4"	4-15/16"	6-1/8"	7-5/16"	8-1/2"	9-11/16"	10-7/8"	12-1/16"	13-1/4"	14-7/16"	15-5/8"	16-13/16"	18"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	19-3/16"	20-3/8"	21-9/16"	22-3/4"	23-15/16"	25-1/8"	26-5/16"	27-1/2"	28-11/16"	29-7/8"	31-1/16"	32-1/4"	33-7/16"	34-5/8"	35-13/16"

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

■ Indicates stock panel widths.

Stainless Steel Bar Grating

15 Space

Use this table when evaluating spans and loads for the following types of stainless steel grating:

15-WS-4, 15-WS-2, 15-DTS-4, 15-DTS-2, 15-SLS-4, & 15-SLS-2 (15/16") Load Table

Bearing Bar Size (inches)	Approx. Weight psf *	Max. Ped. Span**	Sec. Prop.*** Sx in ³ Ix in ⁴	Unsupported Span													
					2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0
3/4 x 3/16	6.9	4'-0"	0.225 0.084	U	750	480	333	245	188	148	120	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 20,000 psi.					
				D	0.114	0.179	0.257	0.350	0.457	0.579	0.714						
				C	750	600	500	429	375	333	300						
				D	0.091	0.143	0.206	0.280	0.366	0.463	0.571						
1 x 1/8	6.2	4'-6"	0.267 0.133	U	889	569	395	290	222	176	142	The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.					
				D	0.086	0.134	0.193	0.263	0.343	0.434	0.536						
				C	889	711	593	508	444	395	356						
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429						
1 x 3/16	8.9	4'-11"	0.400 0.200	U	1,333	853	593	435	333	263	213	176	148	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches			
				D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648	0.771				
				C	1,333	1,067	889	762	667	593	533	485	444				
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617				
1-1/4 x 1/8	7.5	5'-4"	0.417 0.260	U	1,389	889	617	454	347	274	222	184	154	132			
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724			
				C	1,389	1,111	926	794	694	617	556	505	463	427			
				D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579			
1-1/4 x 3/16	11.0	5'-10"	0.625 0.391	U	2,083	1,333	926	680	521	412	333	276	232	197	170		
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724	0.840		
				C	2,083	1,667	1,389	1,191	1,042	926	833	758	694	641	595		
				D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579	0.672		
1-1/2 x 1/8	8.9	6'-1"	0.600 0.450	U	2,000	1,280	889	653	500	395	320	265	222	189	163	125	
				D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914	
				C	2,000	1,600	1,333	1,143	1,000	889	800	727	667	615	571	500	
				D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731	
1-1/2 x 3/16	13.2	6'-9"	0.900 0.675	U	3,000	1,920	1,333	980	750	593	480	397	333	284	245	188	148
				D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914	1.157
				C	3,000	2,400	2,000	1,714	1,500	1,333	1,200	1,091	1,000	923	857	750	667
				D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731	0.926
1-3/4 x 1/8	10.4	6'-10"	0.817 0.715	U	2,722	1,742	1,210	889	681	538	436	360	303	258	222	170	134
				D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992
				C	2,722	2,178	1,815	1,556	1,361	1,210	1,089	990	907	838	778	681	605
				D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793
1-3/4 x 3/16	15.3	7'-7"	1.225 1.072	U	4,083	2,613	1,815	1,333	1,021	807	653	540	454	387	333	255	202
				D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992
				C	4,083	3,267	2,722	2,333	2,042	1,815	1,633	1,485	1,361	1,256	1,167	1,021	907
				D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793
2 x 1/8	11.8	7'-7"	1.067 1.067	U	3,556	2,276	1,580	1,161	889	702	569	470	395	337	290	222	176
				D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868
				C	3,556	2,844	2,370	2,032	1,778	1,580	1,422	1,293	1,185	1,094	1,016	889	790
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
2 x 3/16	17.3	8'-4"	1.600 1.600	U	5,333	3,413	2,370	1,742	1,333	1,054	853	705	593	505	435	333	263
				D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868
				C	5,333	4,267	3,556	3,048	2,667	2,370	2,133	1,939	1,778	1,641	1,524	1,333	1,185
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
2-1/4 x 3/16	19.4	9'-2"	2.025 2.278	U	6,750	4,320	3,000	2,204	1,688	1,333	1,080	893	750	639	551	422	333
				D	0.038	0.060	0.086	0.117	0.152	0.193	0.238	0.288	0.343	0.402	0.467	0.610	0.771
				C	6,750	5,400	4,500	3,857	3,375	3,000	2,700	2,455	2,250	2,077	1,929	1,688	1,500
				D	0.030	0.048	0.069	0.093	0.122	0.154	0.190	0.230	0.274	0.322	0.373	0.488	0.617
2-1/2 x 3/16	21.5	9'-11"	2.500 3.125	U	8,333	5,333	3,704	2,721	2,083	1,646	1,333	1,102	926	789	680	521	412
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
				C	8,333	6,667	5,556	4,762	4,167	3,704	3,333	3,030	2,778	2,564	2,381	2,083	1,852
				D	0.027	0.043	0.062	0.084	0.110	0.139	0.171	0.207	0.247	0.290	0.336	0.439	0.555

* Weight per square foot based upon 15-WS-4 grating. Add .60 psf for 2" on center cross bars. ** Maximum pedestrian load is defined as a 100# uniform load with deflection $\leq 1/4$ inch. (The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.) *** Section properties per foot of width.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will vary from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	1'-1/8"	2'-1/16"	3"	3'-15/16"	4'-7/8"	5'-13/16"	6'-3/4"	7'-11/16"	8'-5/8"	9'-9/16"	10'-1/2"	11'-7/16"	12'-3/8"	13'-5/16"	14'-1/4"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	15'-3/16"	16'-1/8"	17'-1/16"	18"	18'-15/16"	19'-7/8"	20'-13/16"	21'-3/4"	22'-11/16"	23'-5/8"	24'-9/16"	25'-1/2"	26'-7/16"	27'-3/8"	28'-5/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39							
Panel Width	29'-1/4"	30'-3/16"	31'-1/8"	32'-1/16"	33"	33'-15/16"	34'-7/8"	35'-13/16"							

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

■ Indicates stock panel widths.

Stainless Steel Bar Grating

11 Space

Use this table when evaluating spans and loads for the following types of stainless steel grating:
(11/16") Load Table 11-WS-4, 11-WS-2, 11-DTS-4, 11-DTS-2, 11-SLS-4, & 11-SLS-2

Bearing Bar Size (inches)	Approx. Weight psf *	Max. Ped. Span**	Sec. Prop.*** Sx in ³ Ix in ⁴	Unsupported Span																
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0				
3/4 x 3/16	9.1	4'-4"	0.307 0.115	U	1,023	655	455	334	256	202	164	160	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 20,000 psi. The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances. Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.							
				D	0.114	0.179	0.257	0.350	0.457	0.579	0.714									
				C	1,023	818	682	584	511	455	409									
				D	0.091	0.143	0.206	0.280	0.366	0.463	0.571									
1 x 1/8	8.1	4'-10"	0.364 0.182	U	1,212	776	539	396	303	239	194	160								
				D	0.086	0.134	0.193	0.263	0.343	0.434	0.536								0.648	
				C	1,212	970	808	693	606	539	485								441	
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429								0.519	
1 x 3/16	11.9	5'-4"	0.545 0.273	U	1,818	1,164	0.898	0.898	455	359	291	240	202	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches						
				D	0.086	0.134	1.212	1.039	0.343	0.434	0.536	0.648	606							
				C	1,818	1,455	0.154	0.210	909	808	727	661	0.771							
				D	0.069	0.107			0.274	0.347	0.429	0.519	0.617							
1-1/4 x 1/8	10.0	5'-9"	0.568 0.355	U	1,894	1,212	842	618	474	374	303	250	210							
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617						0.724	
				C	1,894	1,515	1,263	1,082	947	842	758	689	631						583	
				D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494						0.579	
1-1/4 x 3/16	14.7	6'-4"	0.852 0.533	U	2,841	1,818	1,263	928	710	561	455	376	316	269	232					
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724	0.840					
				C	2,841	2,273	1,894	1,623	1,421	1,263	1,136	1,033	947	874	812					
				D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579	0.672					
1-1/2 x 1/8	11.9	6'-7"	0.818 0.614	U	2,727	1,746	1,212	891	682	539	436	361	303	258	223	171				
				D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914				
				C	2,727	2,182	1,818	1,558	1,364	1,212	1,091	992	909	839	779	682				
				D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731				
1-1/2 x 3/16	17.7	7'-3"	1.227 0.920	U	4,091	2,618	1,818	1,336	1,023	808	655	541	455	387	334	256	202			
				D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914	1.157			
				C	4,091	3,273	2,727	2,338	2,046	1,818	1,636	1,488	1,364	1,259	1,169	1,023	909			
				D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731	0.926			
1-3/4 x 1/8	13.9	7'-5"	1.114 0.974	U	3,712	2,376	1,650	1,212	928	733	594	491	413	351	303	232	183			
				D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992			
				C	3,712	2,970	2,475	2,121	1,856	1,650	1,485	1,350	1,237	1,142	1,061	928	825			
				D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793			
1-3/4 x 3/16	20.5	8'-2"	1.670 1.462	U	5,568	3,564	2,475	1,818	1,392	1,100	891	736	619	527	455	348	275			
				D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992			
				C	5,568	4,455	3,712	3,182	2,784	2,475	2,227	2,025	1,856	1,713	1,591	1,392	1,237			
				D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793			
2 x 1/8	15.8	8'-2"	1.455 1.455	U	4,849	3,103	2,155	1,583	1,212	958	776	641	539	459	396	303	239			
				D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868			
				C	4,849	3,879	3,232	2,771	2,424	2,155	1,939	1,763	1,616	1,492	1,385	1,212	1,077			
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694			
2 x 3/16	23.3	9'-0"	2.182 2.182	U	7,273	4,655	3,232	2,375	1,818	1,437	1,164	962	808	689	594	455	359			
				D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868			
				C	7,273	5,818	4,849	4,156	3,636	3,232	2,909	2,645	2,424	2,238	2,078	1,818	1,616			
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694			
2-1/4 x 3/16	26.1	9'-10"	2.761 3.107	U	9,205	5,891	4,091	3,006	2,301	1,818	1,473	1,217	1,023	871	751	575	455			
				D	0.038	0.060	0.086	0.117	0.152	0.193	0.238	0.288	0.343	0.402	0.467	0.610	0.771			
				C	9,205	7,364	6,136	5,260	4,602	4,091	3,682	3,347	3,068	2,832	2,630	2,301	2,046			
				D	0.030	0.048	0.069	0.093	0.122	0.154	0.190	0.230	0.274	0.322	0.373	0.488	0.617			
2-1/2 x 3/16	28.9	10'-8"	3.409 4.261	U	11,364	7,273	5,051	3,711	2,841	2,245	1,818	1,503	1,263	1,076	928	710	561			
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694			
				C	11,364	9,091	7,576	6,494	5,682	5,051	4,546	4,132	3,788	3,497	3,247	2,841	2,525			
				D	0.027	0.043	0.062	0.084	0.110	0.139	0.171	0.207	0.247	0.290	0.336	0.439	0.555			

* Weight per square foot based upon 11-WS-4 grating. Add .60 psf for 2" on center cross bars. ** Maximum pedestrian load is defined as a 100# uniform load with deflection ≤ 1/4 inch. (The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.) *** Section properties per foot of width.
Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will vary from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	7/8"	1-9/16"	2-1/4"	2-15/16"	3-5/8"	4-5/16"	5"	5-11/16"	6-3/8"	7-1/16"	7-3/4"	8-7/16"	9-1/8"	9-13/16"	10-1/2"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	11-3/16"	11-7/8"	12-9/16"	13-1/4"	13-15/16"	14-5/8"	15-5/16"	16"	16-11/16"	17-3/8"	18-1/16"	18-3/4"	19-7/16"	20-1/8"	20-13/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	21-1/2"	22-3/16"	22-7/8"	23-9/16"	24-1/4"	24-15/16"	25-5/8"	26-5/16"	27"	27-11/16"	28-3/8"	29-1/16"	29-3/4"	30-7/16"	31-1/8"
Number of Bearing Bars	47	48	49	50	51	52	53								
Panel Width	31-13/16"	32-1/2"	33-3/16"	33-7/8"	34-9/16"	35-1/4"	35-15/16"								

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

■ Indicates stock panel widths.

Stainless Steel Bar Grating

Use this table when evaluating spans and loads for the following types of stainless steel grating:

8-DTS-4, 8-DTS-2, 8-SLS-4, & 8-SLS-2

8 Space (1/2") Load Table

Bearing Bar Size (inches)	Approx. Weight psf *	Max. Ped. Span**	Sec.Prop.*** Sx in³ Ix in⁴	Unsupported Span														
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0		
3/4 x 3/16	12.3	4'-8"	0.422 0.158	U	1,406	900	625	459	352	278	225	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 20,000 psi. The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances. Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.						
				D	0.114	0.179	0.257	0.350	0.457	0.579	0.714							
				C	1,406	1,125	938	804	703	625	563							
				D	0.091	0.143	0.206	0.280	0.366	0.463	0.571							
1 x 1/8	11.0	5'-3"	0.500 0.250	U	1,667	1,067	741	544	417	329	267	220	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches					
				D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648						
				C	1,667	1,333	1,111	952	833	741	667	606						
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519						
1 x 3/16	16.2	5'-10"	0.750 0.375	U	2,500	1,600	1,111	816	625	494	400	331	278	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches				
				D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648	0.771					
				C	2,500	2,000	1,667	1,429	1,250	1,111	1,000	909	833					
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617					
1-1/4 x 1/8	13.6	6'-2"	0.781 0.488	U	2,604	1,667	1,157	850	651	514	417	344	289	247				
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724				
				C	2,604	2,083	1,736	1,488	1,302	1,157	1,042	947	868	801				
				D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579				
1-1/4 x 3/16	20.0	6'-10"	1.172 0.732	U	3,906	2,500	1,736	1,276	977	772	625	517	434	370	319	244		
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724	0.840	1.097		
				C	3,906	3,125	2,604	2,232	1,953	1,736	1,563	1,421	1,302	1,202	1,116	977		
				D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579	0.672	0.878		
1-1/2 x 1/8	16.2	7'-1"	1.125 0.844	U	3,750	2,400	1,667	1,225	938	741	600	496	417	355	306	234		
				D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914		
				C	3,750	3,000	2,500	2,143	1,875	1,667	1,500	1,364	1,250	1,154	1,071	938		
				D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731		
1-1/2 x 3/16	24.0	7'-11"	1.688 1.266	U	5,625	3,600	2,500	1,837	1,406	1,111	900	744	625	533	459	352	278	
				D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914	1.157	
				C	5,625	4,500	3,750	3,214	2,813	2,500	2,250	2,046	1,875	1,731	1,607	1,406	1,250	
				D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731	0.926	
1-3/4 x 1/8	18.9	8'-0"	1.531 1.340	U	5,104	3,267	2,269	1,667	1,276	1,008	817	675	567	483	417	319	252	
				D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992	
				C	5,104	4,083	3,403	2,917	2,552	2,269	2,042	1,856	1,701	1,571	1,458	1,276	1,134	
				D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793	
1-3/4 x 3/16	27.9	8'-10"	2.297 2.010	U	7,656	4,900	3,403	2,500	1,914	1,512	1,225	1,012	851	725	625	479	378	
				D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992	
				C	7,656	6,125	5,104	4,375	3,828	3,403	3,063	2,784	2,552	2,356	2,188	1,914	1,701	
				D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793	
2 x 1/8	21.5	8'-10"	2.000 2.000	U	6,667	4,267	2,963	2,177	1,667	1,317	1,067	882	741	631	544	417	329	
				D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868	
				C	6,667	5,333	4,444	3,810	3,333	2,963	2,667	2,424	2,222	2,051	1,905	1,667	1,482	
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694	
2 x 3/16	31.8	9'-9"	3.000 3.000	U	10,000	6,400	4,444	3,265	2,500	1,975	1,600	1,322	1,111	947	816	625	494	
				D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868	
				C	10,000	8,000	6,667	5,714	5,000	4,444	4,000	3,636	3,333	3,077	2,857	2,500	2,222	
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694	
2-1/4 x 3/16	35.7	10'-8"	3.797 4.271	U	12,656	8,100	5,625	4,133	3,164	2,500	2,025	1,674	1,406	1,198	1,033	791	625	
				D	0.038	0.060	0.086	0.117	0.152	0.193	0.238	0.288	0.343	0.402	0.467	0.610	0.771	
				C	12,656	10,125	8,438	7,232	6,328	5,625	5,063	4,602	4,219	3,894	3,616	3,164	2,813	
				D	0.030	0.048	0.069	0.093	0.122	0.154	0.190	0.230	0.274	0.322	0.373	0.488	0.617	
2-1/2 x 3/16	39.6	11'-7"	4.688 5.859	U	15,625	10,000	6,944	5,102	3,906	3,086	2,500	2,066	1,736	1,479	1,276	977	772	
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694	
				C	15,625	12,500	10,417	8,929	7,813	6,944	6,250	5,682	5,208	4,808	4,464	3,906	3,472	
				D	0.027	0.043	0.062	0.084	0.110	0.139	0.171	0.207	0.247	0.290	0.336	0.439	0.555	

* Weight per square foot based upon 8-SLS-4 grating. Add .30 psf for 2" on center cross bars. ** Maximum pedestrian load is defined as a 100# uniform load with deflection ≤ 1/4 inch. (The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.) *** Section properties per foot of width.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will vary from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	11-1/16"	1-3/16"	1-11/16"	2-3/16"	2-11/16"	3-3/16"	3-11/16"	4-3/16"	4-11/16"	5-3/16"	5-11/16"	6-3/16"	6-11/16"	7-3/16"	7-11/16"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	8-3/16"	8-11/16"	9-3/16"	9-11/16"	10-3/16"	10-11/16"	11-3/16"	11-11/16"	12-3/16"	12-11/16"	13-3/16"	13-11/16"	14-3/16"	14-11/16"	15-3/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	15-11/16"	16-3/16"	16-11/16"	17-3/16"	17-11/16"	18-3/16"	18-11/16"	19-3/16"	19-11/16"	20-3/16"	20-11/16"	21-3/16"	21-11/16"	22-3/16"	22-11/16"
Number of Bearing Bars	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Panel Width	23-3/16"	23-11/16"	24-3/16"	24-11/16"	25-3/16"	25-11/16"	26-3/16"	26-11/16"	27-3/16"	27-11/16"	28-3/16"	28-11/16"	29-3/16"	29-11/16"	30-3/16"
Number of Bearing Bars	62	63	64	65	66	67	68	69	70	71	72				
Panel Width	30-11/16"	31-3/16"	31-11/16"	32-3/16"	32-11/16"	33-3/16"	33-11/16"	34-3/16"	34-11/16"	35-3/16"	35-11/16"				

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

■ Indicates stock panel widths.

Stainless Steel Bar Grating

7 Space (7/16") Load Table

Use this table when evaluating spans and loads for the following types of stainless steel grating:
7-DTS-4, 7-DTS-2, 7-SLS-4, & 7-SLS-2

Bearing Bar Size (inches)	Approx. Weight psf *	Max. Ped. Span**	Sec. Prop.*** Sx in ³ Ix in ⁴	Unsupported Span												
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0
3/4 x 3/16	13.9	4'-10"	0.482 0.181	U	1.607	1.029	714	525	402	318	257	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 20,000 psi.				
				D	0.114	0.179	0.257	0.350	0.457	0.579	0.714					
				C	1.607	1.286	1.071	918	804	714	643					
				D	0.091	0.143	0.206	0.280	0.366	0.463	0.571					
1 x 1/8	12.4	5'-5"	0.571 0.286	U	1.905	1.219	847	622	476	376	305	The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.				
				D	0.086	0.134	0.193	0.263	0.343	0.434	0.536					
				C	1.905	1.524	1.270	1,088	952	847	762					
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429					
1 x 3/16	18.3	6'-0"	0.857 0.429	U	2.857	1.829	1,270	933	714	564	457	378	318	271	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches	
				D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648	0.771	0.905		
				C	2.857	2.286	1,905	1,633	1,429	1,270	1,143	1,039	952	879		
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724		
1-1/4 x 1/8	15.3	6'-5"	0.893 0.558	U	2,976	1,905	1,323	972	744	588	476	394	331	282		
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724		
				C	2,976	2,381	1,984	1,701	1,488	1,323	1,191	1,082	992	916		
				D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579		
1-1/4 x 3/16	22.7	7'-1"	1.339 0.837	U	4,464	2,857	1,984	1,458	1,116	882	714	590	496	423	364	279
				D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724	0.840	1,097
				C	4,464	3,571	2,976	2,551	2,232	1,984	1,786	1,623	1,488	1,374	1,276	1,116
				D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579	0.672	0.878
1-1/2 x 1/8	18.3	7'-4"	1.286 0.964	U	4,286	2,743	1,905	1,399	1,071	847	686	567	476	406	350	268
				D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914
				C	4,286	3,429	2,857	2,449	2,143	1,905	1,714	1,558	1,429	1,319	1,225	1,071
				D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731
1-1/2 x 3/16	27.2	8'-2"	1.929 1.446	U	6,429	4,114	2,857	2,099	1,607	1,270	1,029	850	714	609	525	402
				D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914
				C	6,429	5,143	4,286	3,674	3,214	2,857	2,571	2,338	2,143	1,978	1,837	1,607
				D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731
1-3/4 x 1/8	21.3	8'-3"	1.750 1.531	U	5,833	3,733	2,593	1,905	1,458	1,152	933	771	648	552	476	365
				D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784
				C	5,833	4,667	3,889	3,333	2,917	2,593	2,333	2,121	1,944	1,795	1,667	1,458
				D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627
1-3/4 x 3/16	31.6	9'-2"	2.625 2.297	U	8,750	5,600	3,889	2,857	2,188	1,728	1,400	1,157	972	828	714	547
				D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784
				C	8,750	7,000	5,833	5,000	4,375	3,889	3,500	3,182	2,917	2,692	2,500	2,188
				D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627
2 x 1/8	24.3	9'-2"	2.286 2.286	U	7,619	4,876	3,386	2,488	1,905	1,505	1,219	1,008	847	721	622	476
				D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686
				C	7,619	6,095	5,079	4,354	3,810	3,386	3,048	2,771	2,540	2,344	2,177	1,905
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549
2 x 3/16	36.0	10'-1"	3.429 3.429	U	11,429	7,314	5,079	3,732	2,857	2,258	1,829	1,511	1,270	1,082	933	714
				D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686
				C	11,429	9,143	7,619	6,531	5,714	5,079	4,571	4,156	3,810	3,517	3,265	2,857
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549
2-1/4 x 3/16	40.5	11'-1"	4.339 4.882	U	14,464	9,257	6,429	4,723	3,616	2,857	2,314	1,913	1,607	1,369	1,181	904
				D	0.038	0.060	0.086	0.117	0.152	0.193	0.238	0.288	0.343	0.402	0.467	0.610
				C	14,464	11,571	9,643	8,265	7,232	6,429	5,786	5,260	4,821	4,451	4,133	3,616
				D	0.030	0.048	0.069	0.093	0.122	0.154	0.190	0.230	0.274	0.322	0.373	0.488
2-1/2 x 3/16	44.9	12'-0"	5.357 6.696	U	17,857	11,429	7,937	5,831	4,464	3,527	2,857	2,361	1,984	1,691	1,458	1,116
				D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549
				C	17,857	14,286	11,905	10,204	8,929	7,937	7,143	6,494	5,952	5,495	5,102	4,464
				D	0.027	0.043	0.062	0.084	0.110	0.139	0.171	0.207	0.247	0.290	0.336	0.439

* Weight per square foot based upon 7-SLS-4 grating. Add .30 psf for 2" on center cross bars. ** Maximum pedestrian load is defined as a 100# uniform load with deflection $\leq 1/4$ inch. (The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.) *** Section properties per foot of width.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will vary from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	5/8"	1-1/16"	1-1/2"	1-15/16"	2-3/8"	2-13/16"	3-1/4"	3-11/16"	4-1/8"	4-9/16"	5"	5-7/16"	5-7/8"	6-5/16"	6-3/4"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	7-3/16"	7-5/8"	8-1/16"	8-1/2"	8-15/16"	9-3/8"	9-13/16"	10-1/4"	10-11/16"	11-1/8"	11-9/16"	12"	12-7/16"	12-7/8"	13-5/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	13-3/4"	14-3/16"	14-5/8"	15-1/16"	15-1/2"	15-15/16"	16-3/8"	16-13/16"	17-1/4"	17-11/16"	18-1/8"	18-9/16"	19"	19-7/16"	19-7/8"
Number of Bearing Bars	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Panel Width	20-5/16"	20-3/4"	21-3/16"	21-5/8"	22-1/16"	22-1/2"	22-15/16"	23-3/8"	23-13/16"	24-1/4"	24-11/16"	25-1/8"	25-9/16"	26"	26-7/16"
Number of Bearing Bars	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
Panel Width	26-7/8"	27-5/16"	27-3/4"	28-3/16"	28-5/8"	29-1/16"	29-1/2"	29-15/16"	30-3/8"	30-13/16"	31-1/4"	31-11/16"	32-1/8"	32-9/16"	33"
Number of Bearing Bars	77	78	79	80	81	82	83								
Panel Width	33-7/16"	33-7/8"	34-5/16"	34-3/4"	35-3/16"	35-5/8"	36-1/16"								

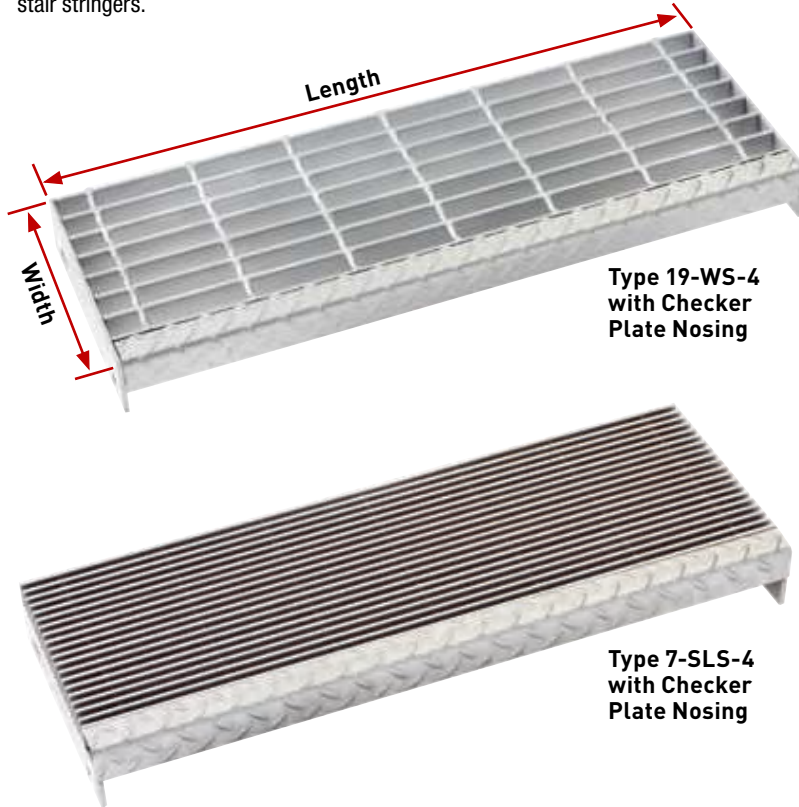
Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

■ Indicates stock panel widths.

Stainless Steel Stair Treads

Stainless Steel Stair Treads

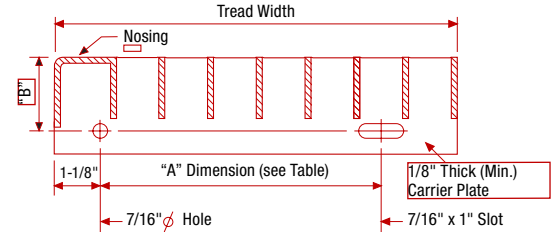
Stainless steel stair treads are available fabricated to any size in type "WS" welded, type "DTS" dovetail pressure locked, or type "SLS" swage locked grating. Treads are manufactured with a defined visible nosing and pre-punched end carrier plates or angles, ready for bolting or welding to the stair stringers.



Stainless Steel Carrier Plates & Angles

Stainless Steel Carrier Plates

Recommended for use with 19, 15, and 11 spaced gratings

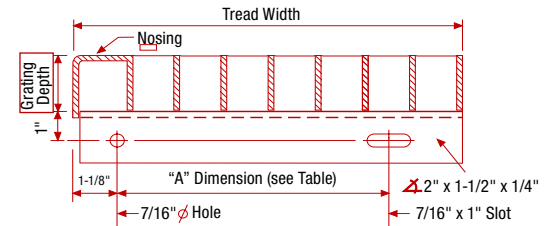


"B" Dimension

1-3/4" for 3/4" thru 1-1/4" bearing bars
2-1/4" for 1-1/2" thru 1-3/4" bearing bars
3-1/4" for 2" thru 2-1/2" bearing bars

Stainless Steel Carrier Angles

Recommended for use with 8 and 7 spaced gratings



Nosing Options



Checker plate nosing welded to grating and carrier plates/angles.

Algrip nosing welded to grating and carrier plates/angles.

Table of Stair Tread Widths

19 Space			15 Space			11 Space			8 Space			7 Space		
Bearing Bars @ 1-3/16" O.C.			Bearing Bars @ 15/16" O.C.			Bearing Bars @ 11/16" O.C.			Bearing Bars @ 1/2" O.C.			Bearing Bars @ 7/16" O.C.		
Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension
6-1/4"	5	2-1/2"	7"	7	4-1/2"	6-1/4"	8	2-1/2"	6-1/2"	11	2-1/2"	6-3/4"	13	2-1/2"
7-3/8"	6	4-1/2"	8"	8	4-1/2"	7-5/8"	10	4-1/2"	7-1/2"	13	4-1/2"	7-5/8"	15	4-1/2"
8-1/2"	7	4-1/2"	8-7/8"	9	4-1/2"	9"	12	4-1/2"	9"	16	4-1/2"	8-1/2"	17	4-1/2"
9-3/4"	8	7"	9-7/8"	10	7"	10-3/8"	14	7"	10"	18	7"	10-1/8"	21	7"
11"	9	7"	10-3/4"	11	7"	11"	15	7"	11"	20	7"	11-1/8"	23	7"
12-1/8"	10	7"	11-5/8"	12	7"	11-3/4"	16	7"	12"	22	7"	12"	25	7"

Recommended Maximum Stainless Steel Stair Tread Lengths*

Bearing Bar Size	19 Space		15 Space		11 Space		8 Space		7 Space	
	1-3/16" O.C.		15/16" O.C.		11/16" O.C.		1/2" O.C.		7/16" O.C.	
	Plain	Serrated	Plain	Serrated	Plain	Serrated	Plain	Serrated	Plain	Serrated
3/4" x 3/16"	2'-7"	—	3'-0"	—	3'-3"	—	3'-7"	—	3'-9"	—
1" x 3/16"	3'-8"	3'-2"	3'-11"	3'-6"	4'-2"	3'-8"	4'-10"	4'-2"	5'-1"	4'-4"
1-1/4" x 3/16"	4'-7"	4'-1"	5'-2"	4'-5"	5'-5"	4'-9"	5'-6"	5'-6"	5'-6"	5'-6"
1-1/2" x 3/16"	5'-6"	5'-2"	5'-6"	5'-6"	5'-6"	5'-6"	5'-7"	5'-6"	5'-9"	5'-6"
1-3/4" x 3/16"	5'-6"	5'-6"	5'-7"	5'-6"	5'-11"	5'-6"	6'-5"	6'-0"	6'-8"	6'-3"
2" x 3/16"	5'-10"	5'-6"	6'-4"	5'-11"	6'-8"	6'-3"	7'-4"	6'-10"	7'-7"	7'-2"
2-1/4" x 3/16"	6'-7"	6'-3"	7'-0"	6'-8"	7'-6"	7'-1"	8'-2"	7'-9"	8'-6"	8'-1"
2-1/2" x 3/16"	7'-3"	6'-11"	7'-10"	7'-5"	8'-3"	7'-10"	9'-1"	8'-8"	9'-5"	9'-0"

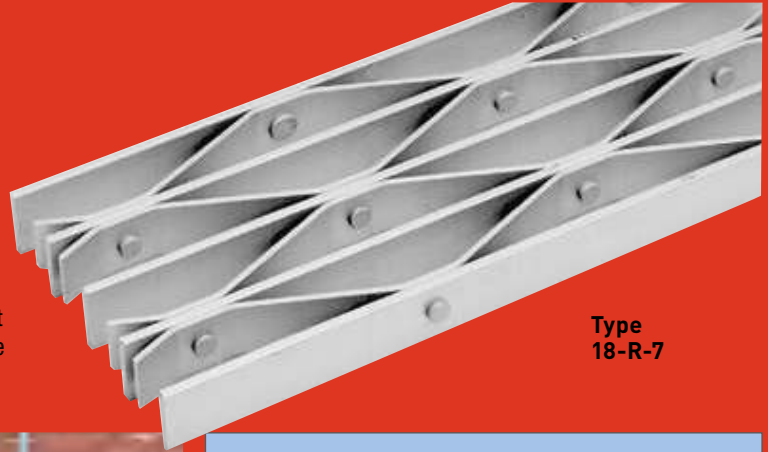
* For treads up to 5'-6", maximum tread lengths are based upon 300 lb. concentrated load on the front 5 inches of the tread, at the center of the tread length. When treads exceed 5'-6" in length, design allows for 300 lb. concentrated loads at 1/3 points of tread length. Deflection is limited to the lesser of .250" or 1/240 of tread length in all cases.

Riveted Steel Grating

Riveted Gratings are manufactured by cold-press riveting straight bearing bars to crimped rectangular flat bars. The oldest form of grating, riveted products offer superior resistance to impact, fatigue and repetitive loads.

Materials

Riveted gratings are available in carbon steel, 6000 series aluminum, and 300 series stainless steels. These products are manufactured with bearing bars spaced either 1-1/8" or 3/4" apart and the standard rivet spacing is 7 inches on center. Optional close rivet spacing of 3-1/2" on center is also available.



Type
18-R-7



Serrated Surface

The standard method of manufacturing serrated riveted grating is to serrate the crimped cross member. When assembled, these cross members are raised slightly above the top surface of the bearing bars to provide a superior unidirectional slip-resistant surface.

If your application is particularly prone to unsafe walking conditions, consider specifying "100% Serrated" grating where both the bearing bars and cross members are provided with serrations.

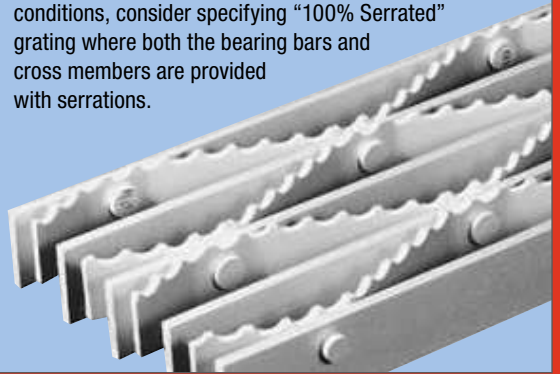
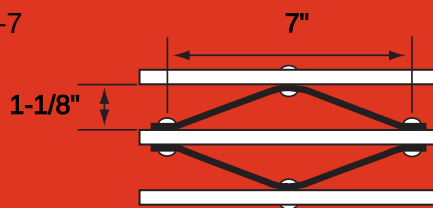
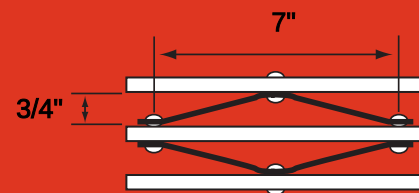


Table of Spacings Available

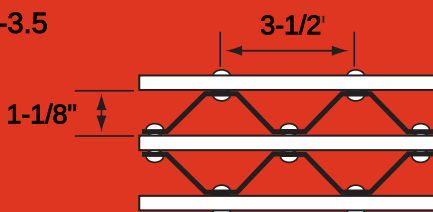
18-R-7



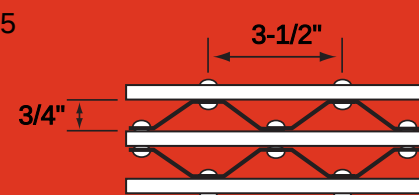
12-R-7



18-R-3.5



12-R-3.5



The part numbers shown above are for carbon steel riveted gratings.

To specify aluminum or stainless steel products, replace the alpha character " R " with " AR " for aluminum products or " SR " for stainless steel products.

Examples:

Type 18-AR-7 for riveted aluminum grating with bearing bars 1-1/8" apart and rivets at 7" on center.

Type 12-SR-7 for stainless steel riveted grating with bearing bars 3/4" apart and rivets at 7" on center.

Riveted Steel Grating

Use this table when evaluating spans and loads for the following types of steel grating:

18-R-7 and 18-R-3.5

18 Space (1-1/8") Steel Load Table

Bearing Bar Size (inches)	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span													
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0		
3/4 x 3/16	7.8	4'-0"	U	613	392	272	200	153	121	98	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 18,000 psi. The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances. Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf. U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches						
			D	0.099	0.155	0.223	0.304	0.397	0.503	0.621							
			C	613	490	409	350	306	272	245							
			D	0.079	0.124	0.179	0.243	0.318	0.402	0.497							
1 x 1/8	7.6	4'-5"	U	726	465	323	237	182	144	116							
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466							
			C	726	581	484	415	363	323	291							
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372							
1 x 3/16	9.4	4'-11"	U	1,090	697	484	356	272	215	174	144						
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563						
			C	1,090	872	726	623	545	484	436	396						
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451						
1-1/4 x 1/8	8.7	5'-3"	U	1,135	726	504	371	284	224	182	150	126					
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536					
			C	1,135	908	757	649	567	504	454	413	378					
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429					
1-1/4 x 3/16	11.0	5'-10"	U	1,702	1,090	757	556	426	336	272	225	189	161				
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629				
			C	1,702	1,362	1,135	973	851	757	681	619	567	524				
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504				
1-1/2 x 1/8	9.9	6'-0"	U	1,634	1,046	726	534	409	323	262	216	182	155	133	102		
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794		
			C	1,634	1,307	1,090	934	817	726	654	594	545	503	467	409		
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636		
1-1/2 x 3/16	12.5	6'-8"	U	2,451	1,569	1,090	800	613	484	392	324	272	232	200	153		
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794		
			C	2,451	1,961	1,634	1,401	1,226	1,090	981	891	817	754	700	613		
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636		
1-3/4 x 3/16	14.2	7'-6"	U	3,337	2,135	1,483	1,090	834	659	534	441	371	316	272	209		
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681		
			C	3,337	2,669	2,224	1,907	1,668	1,483	1,335	1,213	1,112	1,027	953	834		
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545		
2 x 3/16	16.8	8'-3"	U	4,358	2,789	1,937	1,423	1,090	861	697	576	484	413	356	272		
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596		
			C	4,358	3,486	2,905	2,490	2,179	1,937	1,743	1,585	1,453	1,341	1,245	1,090		
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477		
2-1/4 x 3/16	18.3	9'-0"	U	5,515	3,530	2,451	1,801	1,379	1,090	883	729	613	522	450	345		
			D	0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.530		
			C	5,515	4,412	3,677	3,152	2,758	2,451	2,206	2,006	1,839	1,697	1,576	1,379		
			D	0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.424		
2-1/2 x 3/16	19.9	9'-9"	U	6,809	4,358	3,026	2,223	1,702	1,345	1,090	900	757	645	556	426		
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477		
			C	6,809	5,447	4,540	3,891	3,405	3,026	2,724	2,476	2,270	2,095	1,946	1,702		
			D	0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252	0.292	0.381		

* Weight per square foot based upon rivets spaced at 7" on center. Add .40 psf for 3-1/2" rivet centers.

** Maximum pedestrian load is defined as a 100# uniform load with deflection $\leq 1/4$ inch. The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Riveted Steel Grating

18 Space

(1-1/8") Aluminum Load Table

Use this table when evaluating spans and loads for the following types of aluminum grating:

18-AR-7 and 18-AR-3.5

Bearing Bar Size (inches)	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span											
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0
1 x 1/8	2.7	3'-5"	U	484	310	215	158	121	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 12,000 psi. The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances. Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf. U = uniform load in pounds/sq. ft. C = concentrated load in pounds/foot of grating width D = deflection in inches						
			D	0.144	0.225	0.324	0.441	0.576							
			C	484	387	323	277	242							
			D	0.115	0.180	0.259	0.353	0.461							
1 x 3/16	3.3	3'-9"	U	726	465	323	237	182	144						
			D	0.144	0.225	0.324	0.441	0.576	0.729						
			C	726	581	484	415	363	323						
			D	0.115	0.180	0.259	0.353	0.461	0.583						
1-1/4 x 1/8	3.1	4'-0"	U	757	484	336	247	189	149	121					
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720					
			C	757	605	504	432	378	336	303					
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576					
1-1/4 x 3/16	3.8	4'-5"	U	1,135	726	504	371	284	224	182					
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720					
			C	1,135	908	757	649	567	504	454					
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576					
1-1/2 x 1/8	3.4	4'-7"	U	1,090	697	484	356	272	215	174	144				
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726				
			C	1,090	872	726	623	545	484	436	396				
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581				
1-1/2 x 3/16	4.4	5'-1"	U	1,634	1,046	726	534	409	323	262	216	182			
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864			
			C	1,634	1,307	1,090	934	817	726	654	594	545			
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691			
1-3/4 x 3/16	4.9	5'-9"	U	2,224	1,424	989	726	556	439	356	294	247	211		
			D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869		
			C	2,224	1,780	1,483	1,271	1,112	989	890	809	741	684		
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695		
2 x 3/16	5.8	6'-4"	U	2,905	1,859	1,291	949	726	574	465	384	323	275	237	
			D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	
			C	2,905	2,324	1,937	1,660	1,453	1,291	1,162	1,057	968	894	830	
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	
2-1/4 x 3/16	6.4	6'-11"	U	3,677	2,353	1,634	1,201	919	726	588	486	409	348	300	230
			D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.024
			C	3,677	2,942	2,451	2,101	1,839	1,634	1,471	1,337	1,226	1,131	1,051	919
			D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819
2-1/2 x 3/16	6.9	7'-6"	U	4,540	2,905	2,018	1,482	1,135	897	726	600	504	430	371	284
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
			C	4,540	3,632	3,026	2,594	2,270	2,018	1,816	1,651	1,513	1,397	1,297	1,135
			D	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737

* Weight per square foot based upon rivets spaced at 7" on center. Add .20 psf for 3-1/2" rivet centers.

** Maximum pedestrian load is defined as a 100# uniform load with deflection $\leq 1/4$ inch. The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Riveted Steel Grating

Use this table when evaluating spans and loads for the following types of steel grating:

12-R-7 and 12-R-3.5

12 Space (3/4") Steel Load Table

Bearing Bar Size (inches)	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span														
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0			
3/4 x 3/16	10.7	4'-4"	U	858	549	381	280	215	170	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 18,000 psi.								
			D	0.099	0.155	0.223	0.304	0.397	0.503									
			C	858	686	572	490	429	381									
			D	0.079	0.124	0.179	0.243	0.318	0.402									
1 x 3/16	12.8	5'-4"	U	1,525	976	678	498	381	301	244	202	will be affected by the slight variations in mill and manufacturing tolerances.						
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563							
			C	1,525	1,220	1,017	872	763	678	610	555							
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451							
1-1/4 x 3/16	15.0	6'-4"	U	2,383	1,525	1,059	778	596	471	381	315	265	226	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches				
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629					
			C	2,383	1,907	1,589	1,362	1,192	1,059	953	867	794	733					
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504					
1-1/2 x 3/16	17.1	7'-3"	U	3,432	2,196	1,525	1,121	858	678	549	454	381	325	280	215			
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794			
			C	3,432	2,745	2,288	1,961	1,716	1,525	1,373	1,248	1,144	1,056	981	858			
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636			
1-3/4 x 3/16	19.4	8'-2"	U	4,671	2,989	2,076	1,525	1,168	923	747	618	519	442	381	292			
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681			
			C	4,671	3,737	3,114	2,669	2,336	2,076	1,868	1,699	1,557	1,437	1,335	1,168			
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545			
2 x 3/16	22.9	9'-0"	U	6,101	3,905	2,712	1,992	1,525	1,205	976	807	678	578	498	381			
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596			
			C	6,101	4,881	4,067	3,486	3,050	2,712	2,440	2,219	2,034	1,877	1,743	1,525			
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477			
2-1/4 x 3/16	25.0	9'-10"	U	7,721	4,942	3,432	2,521	1,930	1,525	1,235	1,021	858	731	630	483			
			D	0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.530			
			C	7,721	6,177	5,148	4,412	3,861	3,432	3,089	2,808	2,574	2,376	2,206	1,930			
			D	0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.424			
2-1/2 x 3/16	27.2	10''-8"	U	9,533	6,101	4,237	3,113	2,383	1,883	1,525	1,261	1,059	903	778	596			
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477			
			C	9,533	7,626	6,355	5,447	4,766	4,237	3,813	3,466	3,178	2,933	2,724	2,383			
			D	0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252	0.292	0.381			

Use this table when evaluating spans and loads for the following types of aluminum grating:

12-AR-7 and 12-AR-3.5

12 Space (3/4") Aluminum Load Table

Bearing Bar Size (inches)	Approx. Weight psf *	Maximum Pedestrian Span**	Unsupported Span													
			2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0		
3/4 x 3/16	3.7	3'-3"	U	572	366	254	187	143	113	92	All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 12,000 psi. The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances. Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.					
			D	0.192	0.300	0.432	0.588	0.768	0.972	1.200						
			C	572	458	381	327	286	254	229						
			D	0.154	0.240	0.346	0.470	0.614	0.778	0.960						
1 x 3/16	4.5	4'-1"	U	1,017	651	452	332	254	201	163	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches					
			D	0.144	0.225	0.324	0.441	0.576	0.729	0.900						
			C	1,017	813	678	581	508	452	407						
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720						
1-1/4 x 3/16	5.3	4'-10"	U	1,589	1,017	706	519	397	314	254	210	U = uniform load in pounds/sq. ft. C = concentrated load in pounds/ft. of grating width D = deflection in inches				
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871					
			C	1,589	1,271	1,059	908	794	706	636	578					
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697					
1-1/2 x 3/16	6.1	5'-7"	U	2,288	1,464	1,017	747	572	452	366	303	254	217			
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014			
			C	2,288	1,830	1,525	1,307	1,144	1,017	915	832	763	704			
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811			
1-3/4 x 3/16	6.8	6'-3"	U	3,114	1,993	1,384	1,017	779	615	498	412	346	295	254	195	
			D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317	
			C	3,114	2,491	2,076	1,779	1,557	1,384	1,246	1,132	1,038	958	890	779	
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053	
2 x 3/16	8.1	6'-11"	U	4,067	2,603	1,808	1,328	1,017	803	651	538	452	385	332	254	
			D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152	
			C	4,067	3,254	2,712	2,324	2,034	1,808	1,627	1,479	1,356	1,252	1,162	1,017	
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922	
2-1/4 x 3/16	8.9	7'-6"	U	5,148	3,295	2,288	1,681	1,287	1,017	824	681	572	487	420	322	
			D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.024	
			C	5,148	4,118	3,432	2,942	2,574	2,288	2,059	1,872	1,716	1,584	1,471	1,287	
			D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819	
2-1/2 x 3/16	9.6	8'-2"	U	6,355	4,067	2,825	2,075	1,589	1,255	1,017	840	706	602	519	397	
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922	
			C	6,355	5,084	4,237	3,632	3,178	2,825	2,542	2,311	2,118	1,955	1,816	1,589	
			D	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737	

* Weight per square foot based upon rivets spaced at 7" on center. Add .40 psf for steel products with 3-1/2" rivet centers and .20 psf for aluminum products with 3-1/2" rivet centers.

** Maximum pedestrian load is defined as a 100# uniform load with deflection $\leq 1/4$ inch. The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Application Field

“

Steel grating is renowned for its exceptional strength, corrosion resistance, and ease of maintenance, playing a vital role across a multitude of industries. From industrial platforms to municipal works, construction to petrochemicals, and extending to power, transportation, environmental protection, as well as commercial and public facilities, steel grating finds extensive applications in walkways, platforms, stair treads, fencing, and drainage systems. It offers safe and durable solutions tailored to a variety of settings.

”



Steel grating platform



Steel grating platform walkways



Steel grating trench covers



Steel grating maintenance



Steel grating flooring



Steel grating logistics



Steel grating stair treads



Steel grating bridge decks



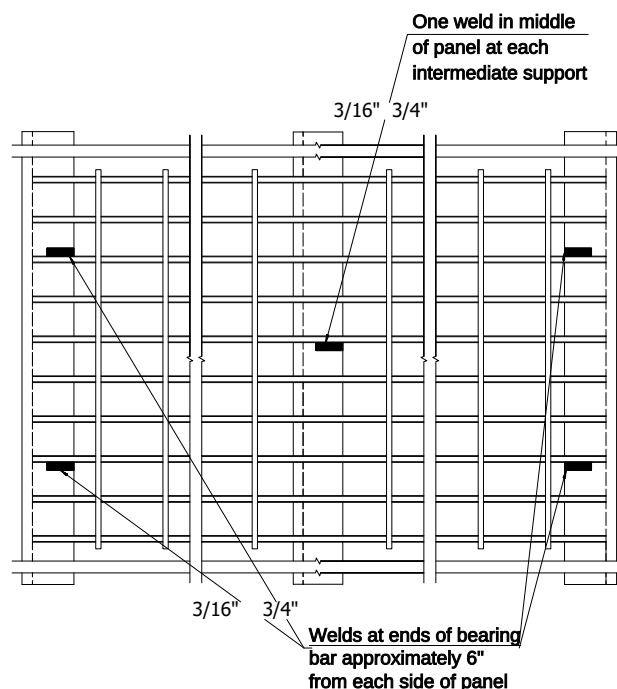
Steel grating irregular platform

INSTALLATION

“ Steel gratings can be installed in two ways: welded installation and grating fasteners. ”

Welded Installation

When steel grating needs to be a permanent installation, welding is highly recommended to fasten steel grating in place by securing welding panels to the supporting structure. The diagram to the right shows the recommended minimum weld size and spacing for pedestrian applications.



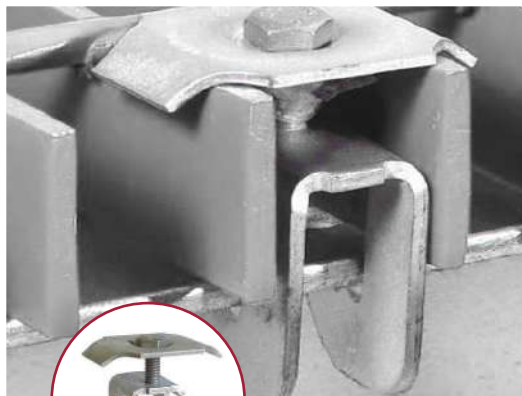
Grating fasteners

For situations where steel grating needs to be removable or welding isn't feasible, it's advised to use grating fasteners. The recommended minimum spacing for fasteners in pedestrian areas matches the minimum weld pattern described previously.



M- Clips

The saddle clip bridges two bearing bars and is attached with self-tapping bolt, self-threader, weld stud or bolt and nut.



G-Clips

This G-clip fastens grating to a horizontal-facing steel structural member edge.



Grate Fast Clips

This grate fast clip enables rapid and secure connection of open grate flooring to steel sections.

FEATURES

- › Do not damage the galvanized layer.
- › It can be demolished at any time, reused.
- › In the later stage, it is necessary to check regularly whether the bolts are loose and fasten them in time to avoid them falling off.
- › Easy to install.

LOADING TABLES (STANDARD)

Service Loads

The load tables provide load/deflection criteria for most common applications. These tables

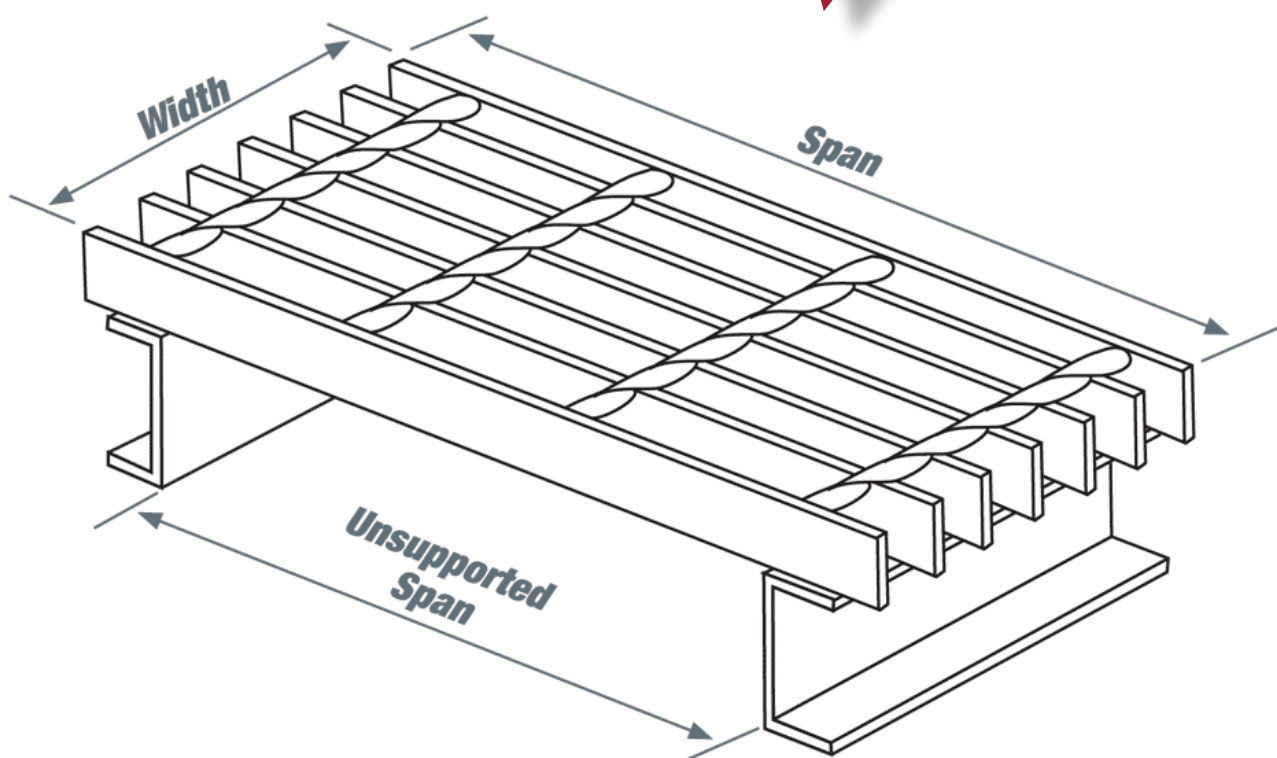
provide a concise reference allowing the specifying authority to select the appropriate bearing bar size and spacing for the intended application.

Pedestrian loads are commonly analyzed with uniform and concentrated loads. For pedestrian comfort, deflection is typically limited to 1/4".

Heavy duty and vehicular load tables are presented for specific load conditions. Heavy duty

load tables are presented with deflection limited to the lesser of 1/8" or $L/400$.

For more detailed information, see Loading Table.

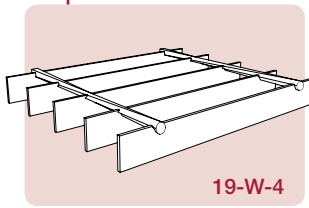


Carbon Steel Welded Bar Grating

Carbon Steel Press-Locked Bar Grating

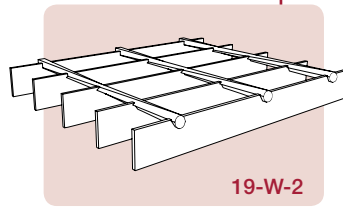
Steel Welded Grating

1-³/₁₆" Center to Center of Bearing Bars



19-W-4

1/4" Round Twisted
Cross Bars
4" Center to Center

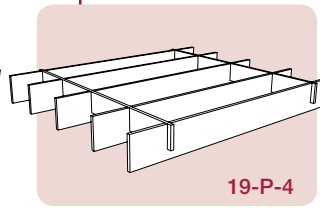


19-W-2

1/4" Round Twisted
Cross Bars
2" Center to Center

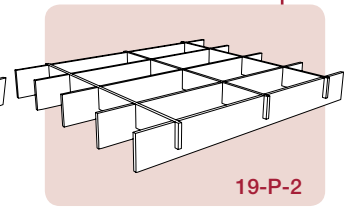
Steel Pressure-Locked

1-³/₁₆" Center to Center of Bearing Bars



19-P-4

Rectangular
Cross Bars
4" Center to Center



19-P-2

Rectangular
Cross Bars
2" Center to Center

Static Load Table – Loads & deflections are theoretical, based on a maximum allowable fiber stress of 18,000 PSI. E = 30,000,000 PSI

Bar Size	Type	Approximate Weight #/Sq. Ft.	Sec. Mod. Per Foot of Width	Load Types	Maximum Safe Clear Span												
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	19-W-4	4.0	0.122	U	366	234	163	120	92	72	NOTE: Spans and loads to the right of the heavy line exceed a deflection of 1/4" for uniform loads of 100#/sq. ft. which provide safe pedestrian comfort, but can be exceeded for other types of loads at the discretion of the engineer.						
	19-W-2	4.3		D	.096	.150	.216	.295	.386	.484							
	19-P-4	4.6		C	366	293	244	209	183	163							
	19-P-2	4.9		D	.077	.120	.173	.235	.307	.389							
3/4" x 3/16"	19-W-4	5.6	0.183	U	549	351	244	179	137	108	NOTE: When calculating loads that require serrated bearing bars, subtract 1/4" from your grating depth and use that load table.						
	19-W-2	6.4		D	.096	.150	.216	.294	.383	.482							
	19-P-4	6.3		C	549	439	366	314	275	244							
	19-P-2	7.1		D	.177	.120	.173	.236	.308	.389							
1" x 1/8"	19-W-4	5.1	0.216	U	648	415	288	212	162	128	104	86	72	U - Safe Uniform Load in lbs. per sq. ft. C - Safe Concentrated Load in lbs. per foot of grating width. D - Deflection in inches.			
	19-W-2	5.4		D	.057	.112	.162	.221	.288	.364	.451	.546	.647				
	19-P-4	5.7		C	648	518	432	370	324	288	259	236	216				
	19-P-2	6.0		D	.057	.090	.129	.176	.230	.291	.359	.435	.517				
1" x 3/16"	19-W-4	7.3	0.325	U	975	624	433	318	244	193	156	129	108				
	19-W-2	8.0		D	.072	.113	.162	.221	.289	.366	.451	.546	.648				
	19-P-4	8.0		C	975	780	650	557	488	435	390	355	325				
	19-P-2	8.7		D	.058	.090	.130	.177	.231	.292	.361	.437	.520				
1 1/4" x 1/8"	19-W-4	6.1	0.339	U	1017	651	452	332	254	201	163	134	113	96	83		
	19-W-2	6.5		D	.058	.090	.130	.177	.231	.293	.362	.435	.520	.609	.708		
	19-P-4	6.8		C	1017	814	678	581	509	452	407	370	339	313	291		
	19-P-2	7.2		D	.046	.072	.104	.142	.185	.234	.289	.350	.416	.488	.560		
1 1/4" x 3/16"	19-W-4	8.9	0.507	U	1521	973	676	497	380	300	243	201	169	144	124		
	19-W-2	9.7		D	.058	.090	.130	.177	.230	.291	.359	.435	.518	.608	.705		
	19-P-4	9.6		C	1521	1217	1014	869	761	676	608	553	507	468	435		
	19-P-2	10.4		D	.046	.072	.104	.141	.184	.233	.288	.348	.415	.487	.565		
1 1/2" x 1/8"	19-W-4	7.3	0.488	U	1464	937	651	478	366	289	234	194	163	139	120	92	72
	19-W-2	7.9		D	.048	.075	.108	.147	.192	.233	.299	.363	.433	.508	.590	.772	.967
	19-P-4	7.9		C	1464	1171	976	837	732	651	586	532	488	450	418	366	325
	19-P-2	8.5		D	.038	.060	.086	.118	.153	.194	.240	.290	.345	.405	.470	.614	.770
1 1/2" x 3/16"	19-W-4	10.6	0.73	U	2190	1402	973	715	548	433	350	290	243	207	179	137	108
	19-W-2	11.8		D	.048	.075	.108	.147	.192	.243	.300	.364	.431	.506	.589	.769	.971
	19-P-4	11.2		C	2190	1752	1460	1251	1095	973	876	796	730	674	626	548	487
	19-P-2	12.4		D	.038	.060	.086	.118	.154	.196	.240	.290	.346	.406	.471	.615	.778
1 3/4" x 3/16"	19-W-4	12.2	0.994	U	2982	1908	1325	974	746	589	477	394	331	282	243	186	147
	19-W-2	13.5		D	.041	.064	.093	.126	.165	.208	.257	.311	.370	.434	.503	.657	.832
	19-P-4	12.9		C	2982	2386	1988	1704	1491	1325	1193	1084	994	918	852	746	663
	19-P-2	14.2		D	.033	.051	.074	.101	.132	.167	.206	.249	.296	.348	.403	.527	.667
2" x 3/16"	19-W-4	13.9	1.299	U	3897	2494	1732	1272	974	770	624	515	433	369	318	244	192
	19-W-2	15.1		D	.036	.056	.081	.110	.144	.182	.225	.272	.324	380	.441	.577	.728
	19-P-4	14.5		C	3897	3118	2598	2227	1949	1732	1559	1417	1299	1199	1113	974	866
	19-P-2	15.7		D	.029	.045	.065	.088	.115	.146	.180	.218	.259	.304	.353	.461	.583
2 1/4" x 3/16"	19-W-4	15.4	1.644	U	4932	3156	2192	1610	1233	974	789	652	548	467	403	308	244
	19-W-2	16.7		D	.032	.050	.072	.098	.128	.162	.200	.242	.288	.338	.392	.512	.649
	19-P-4	16.1		C	4932	3946	3288	2818	2466	2192	1973	1793	1644	1518	1409	1233	1096
	19-P-2	17.4		D	.026	.040	.058	.078	.102	.130	.160	.194	.230	.271	.314	.410	.518
2 1/2" x 3/16"	19-W-4	17.1	2.029	U	6087	3896	2705	1988	1522	1202	974	805	676	570	497	380	301
	19-W-2	18.3		D	.029	.045	.065	.088	.115	.146	.180	.218	.259	.304	.353	.460	.584
	19-P-4	17.7		C	6087	4870	4058	3478	3044	2705	2435	2213	2029	1873	1739	1522	1353
	19-P-2	18.9		D	.023	.036	.052	.071	.092	.117	.144	.174	.207	.243	.282	.369	.467

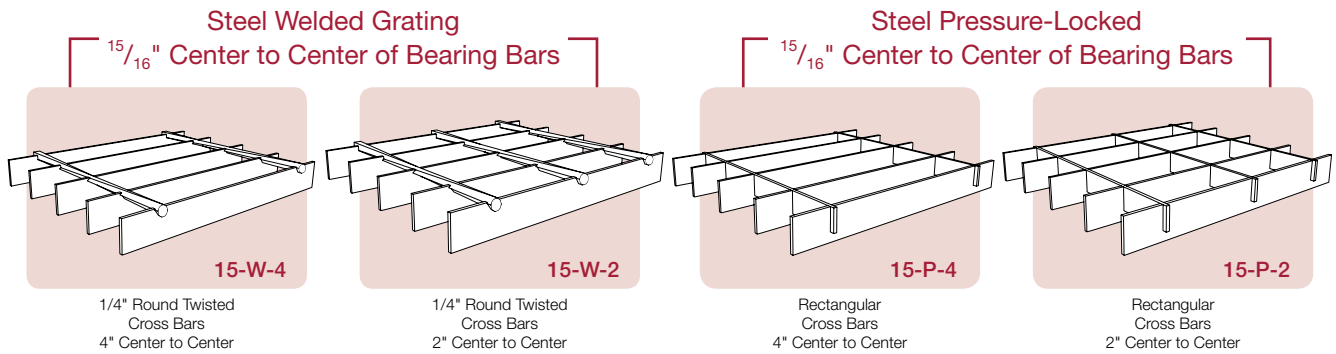
Panel Width Chart in Inche Dimensions are Outside to Outside of Bearing Bars.

Also Available in Stainless Steel

No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1/8" Bar	15/16	2 1/2	3 11/16	4 7/8	6 1/16	7 1/4	8 7/16	9 5/8	10 13/16	12	13 3/16	14 3/8	15 9/16	16 3/4	17 15/16
3/16" Bar	1 3/8	2 9/16	3 3/4	4 15/16	6 1/8	7 5/16	8 1/2	9 11/16	10 7/8	12 1/16	13 1/4	14 7/16	15 5/8	16 13/16	18
No. of Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1/8" Bar	19 1/8	20 5/16	21 1/2	22 11/16	23 7/8	25 1/16	26 1/4	27 7/16	28 5/8	29 13/16	31	32 3/16	33 3/8	34 9/16	35 3/4
3/16" Bar	19 3/16	20 3/8	21 9/16	22 3/4	23 15/16	25 1/8	26 5/16	27 1/2	28 11/16	29 7/8	31 1/16	32 1/4	33 7/16	34 5/8	35 13/16

Shaded columns indicate Standard Panel Width

Carbon Steel Material: ASTM A-1011



Static Load Table – Loads & deflections are theoretical, based on a maximum allowable fiber stress of 18,000 PSI. E = 30,000,000 PSI

Bar Size	Type	Approximate Weight #/Sq. Ft.	Sec. Mod. Per Foot of Width	Load Types	Maximum Safe Clear Span												
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	15-W-4	4.8	0.153	U	459	294	204	150	115	91	NOTE: Spans and loads to the right of the heavy line exceed a deflection of 1/4" for uniform loads of 100#/sq. ft. which provide safe pedestrian comfort, but can be exceeded for other types of loads at the discretion of the engineer.						
	15-W-2	4.8		D	.096	.150	.215	.293	.391	.486							
	15-P-4	5.5		C	459	367	306	262	230	204							
	15-P-2	5.5		D	.077	.120	.172	.234	.307	.387							
3/4" x 3/16"	15-W-4	6.9	0.23	U	690	442	307	225	173	136	NOTE: When calculating loads that require serrated bearing bars, subtract 1/4" from your grating depth and use that load table. EXAMPLE: (1 1/4" x 3/16") serrated bearing bars would have the same strength as (1" x 3/16") non-serrated bearing bars, therefore you would use the (1" x 3/16") load table.						
	15-W-2	7.0		D	.096	.150	.216	.293	.393	.485							
	15-P-4	7.5		C	690	552	460	394	345	307							
	15-P-2	7.7		D	.077	.120	.173	.235	.307	.389							
1" x 1/8"	15-W-4	6.2	0.272	U	816	522	362	266	204	161	131	108	91	U - Safe Uniform Load in lbs. per sq. ft. C - Safe Concentrated Load in lbs. per foot of grating width. D - Deflection in inches.			
	15-W-2	6.4		D	.072	.119	.162	.220	.294	.364	.451	.544	.649				
	15-P-4	6.9		C	816	653	544	466	408	363	326	297	272				
	15-P-2	7.2		D	.058	.090	.129	.176	.230	.291	.359	.435	.518				
1" x 3/16"	15-W-4	9.0	0.409	U	1227	785	545	401	307	242	196	162	136				
	15-W-2	9.3		D	.072	.113	.162	.221	.295	.365	.451	.545	.648				
	15-P-4	9.8		C	1227	982	818	701	614	545	491	446	409				
	15-P-2	10.1		D	.058	.090	.130	.177	.231	.292	.361	.437	.520				
1 1/4" x 1/8"	15-W-4	7.5	0.427	U	1281	820	569	418	320	253	205	169	142	121	105		
	15-W-2	7.9		D	.058	.090	.130	.177	.236	.293	.362	.436	.519	610	.711		
	15-P-4	8.2		C	1281	1025	854	732	641	569	512	466	427	394	366		
	15-P-2	8.7		D	.046	.072	.104	.142	.185	.234	.289	.350	.416	.489	.567		
1 1/4" x 3/16"	15-W-4	11.1	0.638	U	1914	1225	850	625	479	378	306	253	213	181	156		
	15-W-2	11.3		D	.058	.090	.130	.177	.236	.292	.360	.436	.519	.608	.705		
	15-P-4	11.7		C	1914	1531	1276	1094	957	851	766	696	638	589	547		
	15-P-2	12.2		D	.046	.072	.104	.141	.184	.234	.288	.349	.415	.487	.565		
1 1/2" x 1/8"	15-W-4	9.0	0.614	U	1842	1179	819	601	461	364	295	244	205	174	150	115	91
	15-W-2	9.5		D	.048	.075	.108	.147	.196	.243	.300	.363	.432	.506	.586	.767	.972
	15-P-4	9.6		C	1842	1474	1228	1052	921	819	737	670	614	567	526	461	409
	15-P-2	10.6		D	.038	.060	.086	.118	.154	.194	.240	.290	.345	.406	.470	.615	.777
1 1/2" x 3/16"	15-W-4	13.1	0.919	U	2757	1764	1225	900	689	545	441	365	306	261	225	172	136
	15-W-2	13.7		D	.048	.075	.108	.147	.192	.243	.300	.364	.432	.507	.588	.767	.972
	15-P-4	15.2		C	2757	2206	1838	1575	1379	1225	1103	1003	919	848	788	689	613
	15-P-2	15.8		D	.038	.060	.086	.118	.154	.194	.240	.291	.346	.406	.477	.615	.779
1 3/4" x 3/16"	15-W-4	15.2	1.251	U	3753	2402	1668	1226	938	741	600	496	417	355	306	235	184
	15-W-2	15.8		D	.041	.064	.093	.126	.165	.208	.257	.311	.371	.434	.504	.660	.828
	15-P-4	15.8		C	3753	3002	2502	2145	1877	1668	1501	1365	1251	1115	1072	938	834
	15-P-2	16.9		D	.033	.051	.074	.101	.132	.167	.206	.249	.296	.348	.403	.527	.667
2" x 3/16"	15-W-4	17.3	1.634	U	4902	3137	2179	1601	1226	968	784	648	545	464	400	306	242
	15-W-2	17.9		D	.036	.056	.081	.110	.144	.182	.225	.272	.324	.380	.441	.575	.729
	15-P-4	17.9		C	4902	3922	3268	2801	2451	2179	1961	1783	1634	1508	1401	1226	1089
	15-P-2	19.0		D	.029	.045	.065	.088	.115	.146	.180	.218	.259	.304	.353	.461	.583
2 1/4" x 3/16"	15-W-4	19.2	2.068	U	6204	3971	2757	2026	1551	1225	993	820	689	587	506	388	306
	15-W-2	20.0		D	.032	.050	.072	.098	.128	.162	.200	.242	.288	.338	.392	.512	.647
	15-P-4	19.9		C	6204	4963	4136	3545	3102	2757	2482	2256	2068	1909	1773	1551	1379
	15-P-2	21.1		D	.026	.040	.058	.078	.102	.130	.160	.194	.230	.270	.314	.410	.519
2 1/2" x 3/16"	15-W-4	21.3	2.553	U	7659	4902	3404	2501	1915	1513	1225	1037	851	725	625	479	378
	15-W-2	22.1		D	.029	.045	.065	.088	.115	.146	.180	.223	.259	.304	.353	.461	.583
	15-P-4	22.0		C	7659	6127	5106	4377	3830	3404	3064	2785	2553	2357	2188	1915	1702
	15-P-2	23.2		D	.023	.036	.052	.071	.092	.117	.144	.174	.207	.243	.282	.369	.467

Panel Width Chart in Inche Dimensions are Outside to Outside of Bearing Bars.

Also Available in Stainless Steel

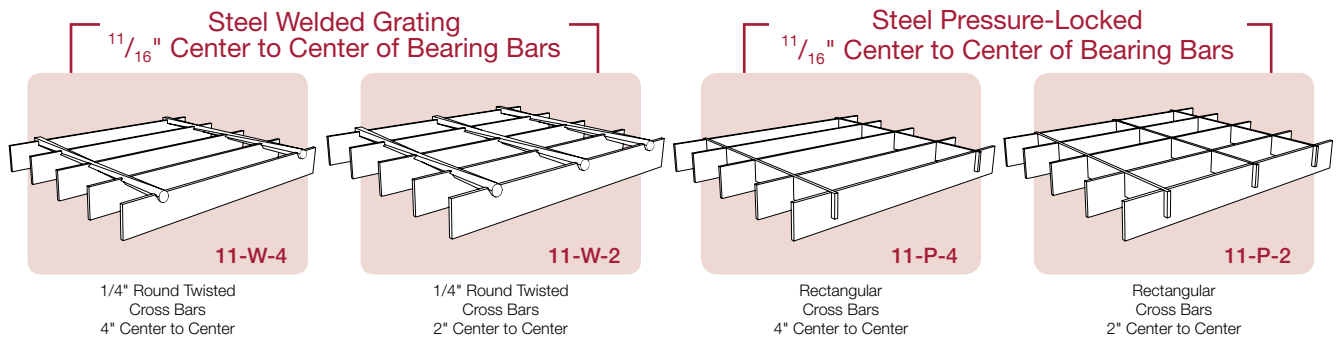
No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1/8" Bar	1 1/16	2	2 15/16	3 7/8	4 13/16	5 3/4	6 11/16	7 5/8	8 9/16	9 1/2	10 7/16	11 3/8	12 5/16	13 1/4	14 3/16	15 1/8	16 1/16	17	17 15/16
3/16" Bar	1 1/8	2 1/16	3	3 15/16	4 7/8	5 13/16	6 3/4	7 11/16	8 5/8	9 9/16	10 1/2	11 7/16	12 3/8	13 5/16	14 1/4	15 3/16	16 1/8	17 1/16	18
No. of Bars	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
1/8" Bar	18 7/8	19 13/16	20 3/4	21 11/16	22 5/8	23 9/16	24 1/2	25 7/16	26 3/8	27 5/16	28 1/4	29 3/16	30 1/8	31 1/16	32	32 15/16	33 7/8	34 13/16	35 3/4
3/16" Bar	18 15/16	19 7/8	20 13/16	21 3/4	22 11/16	23 5/8	24 9/16	25 1/2	26 7/16	27 3/8	28 5/16	29 1/4	30 3/16	31 1/8	32 1/16	33	33 15/16	34 7/8	35 13/16

Shaded columns indicate Standard Panel Width

Carbon Steel Material: ASTM A-1011

Carbon Steel Welded Bar Grating

Carbon Steel Press-Locked Bar Grating



Static Load Table – Loads & deflections are theoretical, based on a maximum allowable fiber stress of 18,000 PSI. E = 30,000,000 PSI

Bar Size	Type	Approximate Weight #/Sq. Ft.	Sec. Mod. Per Foot of Width	Load Types	Maximum Safe Clear Span												
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"
3/4" x 1/8"	11-W-4	6.1	0.207	U	366	397	276	203	155	123	99	NOTE: Spans and loads to the right of the heavy line exceed a deflection of 1/4" for uniform loads of 100#/sq. ft. which provide safe pedestrian comfort, but can be exceeded for other types of loads at the discretion of the engineer.					
	11-W-2	6.6		D	.096	.151	.216	.295	.374	.486	.596						
	11-P-4	6.6		C	366	496	414	355	310	277	248						
	11-P-2	7.6		D	.077	.119	.173	.234	.308	.389	.478						
3/4" x 3/16"	11-W-4	9.1	0.311	U	549	597	415	305	233	184	149	NOTE: When calculating loads that require serrated bearing bars, subtract 1/4" from your grating depth and use that load table.					
	11-W-2	9.0		D	.096	.151	.216	.295	.374	.486	.599						
	11-P-4	9.7		C	549	746	623	534	466	414	373						
	11-P-2	10.4		D	.177	.119	.173	.234	.308	.389	.480						
1" x 1/8"	11-W-4	8.0	0.369	U	648	708	492	361	277	219	177	146	123	EXAMPLE: (11/4" x 3/16") serrate bearing bars would have the same strength as (1" x 3/16") non- serrated bearing bars, therefore you would use the (1" x 3/16") load table.			
	11-W-2	8.5		D	.057	.111	.159	.219	.288	.366	.451	.547	.673				
	11-P-4	8.5		C	648	885	738	632	554	493	443	402	369				
	11-P-2	9.5		D	.057	.090	.129	.176	.231	.293	.360	.434	.518				
1" x 3/16"	11-W-4	11.9	0.554	U	975	1064	739	543	416	328	266	220	185	157	U - Safe Uniform Load in lbs. per sq. ft. C - Safe Concentrated Load in lbs. per foot of grating width. D - Deflection in inches.		
	11-W-2	11.9		D	.072	.111	.159	.219	.288	.366	.451	.547	.673	.760			
	11-P-4	12.6		C	975	1330	1109	950	832	738	665	605	555	510			
	11-P-2	13.3		D	.058	.090	.129	.176	.231	.293	.360	.434	.518	.608			
1 1/4" x 1/8"	11-W-4	9.9	0.578	U	1017	1110	771	566	434	343	277	229	193	164	142		
	11-W-2	10.3		D	.058	.090	.129	.176	.231	.291	.358	.433	.520	.608	.704		
	11-P-4	10.4		C	1017	1388	1157	991	868	772	693	630	579	533	497		
	11-P-2	11.3		D	.046	.072	.104	.141	.183	.233	.288	.349	.416	.487	.565		
1 1/4" x 3/16"	11-W-4	14.9	0.864	U	1521	1659	1152	846	648	512	415	343	288	245	212	162	
	11-W-2	14.8		D	.058	.090	.129	.176	.231	.291	.358	.433	.520	.608	.704	.921	
	11-P-4	15.6		C	1521	2074	1728	1481	1296	1152	1038	943	864	796	742	648	
	11-P-2	16.2		D	.046	.072	.104	.141	.183	.233	.288	.349	.416	.487	.565	.737	
1 1/2" x 1/8"	11-W-4	11.8	0.831	U	1464	1596	1108	814	623	492	399	330	277	236	204	156	123
	11-W-2	12.6		D	.048	.075	.106	.147	.192	.243	.300	.365	.433	.506	.587	.774	.978
	11-P-4	12.3		C	1464	1995	1662	1425	1246	1107	998	908	831	767	714	624	554
	11-P-2	13.9		D	.038	.059	.087	.117	.154	.195	.241	.289	.347	.406	.470	.614	.777
1 1/2" x 3/16"	11-W-4	17.0	1.244	U	2190	2388	1659	1219	933	737	597	493	415	353	305	233	184
	11-W-2	17.8		D	.048	.075	.106	.147	.192	.243	.300	.365	.433	.506	.587	.774	.978
	11-P-4	17.7		C	2190	2985	2489	2133	1866	1658	1493	1356	1245	1147	1068	932	828
	11-P-2	19.7		D	.038	.059	.087	.117	.154	.195	.241	.289	.347	.406	.470	.614	.777
1 3/4" x 3/16"	11-W-4	20.4	1.694	U	2982	3252	2259	1659	1271	1004	813	672	565	481	415	318	251
	11-W-2	20.8		D	.041	.064	.092	.126	.165	.208	.258	.310	.371	.435	.506	.664	.838
	11-P-4	21.0		C	2982	4065	3389	2903	2542	2259	2033	1848	1695	1563	1453	1272	1130
	11-P-2	22.7		D	.033	.052	.074	.101	.132	.167	.206	.249	.297	.347	.403	.527	.667
2" x 3/16"	11-W-4	23.2	2.212	U	3897	4247	2949	2167	1659	1311	1062	877	737	628	542	415	328
	11-W-2	23.8		D	.036	.056	.081	.111	.144	.183	.226	.273	.325	.384	.447	.580	.732
	11-P-4	23.8		C	3897	5309	4424	3792	3318	2950	2655	2412	2211	2041	1897	1660	1476
	11-P-2	25.7		D	.029	.045	.064	.088	.115	.145	.180	.217	.259	.303	.353	.480	.583
2 1/4" x 3/16"	11-W-4	25.9	2.8	U	4932	5376	3733	2743	2100	1659	1344	1111	933	795	686	525	415
	11-W-2	26.5		D	.032	.050	.072	.098	.127	.162	.199	.241	.287	.338	.393	.512	.646
	11-P-4	26.5		C	4932	6720	5600	4800	4200	3733	3360	3055	2799	2584	2401	2100	1868
	11-P-2	28.4		D	.026	.039	.057	.079	.102	.129	.160	.194	.230	.270	.314	.410	.518
2 1/2" x 3/16"	11-W-4	28.7	3.456	U	6087	6636	4608	3385	2592	2048	1659	1371	1152	982	846	648	512
	11-W-2	29.3		D	.029	.044	.064	.088	.116	.145	.180	.217	.260	.304	.354	.465	.586
	11-P-4	29.4		C	6087	8295	6912	5924	5184	4608	4148	3770	3456	3192	2961	2592	2304
	11-P-2	31.2		D	.023	.036	.051	.071	.092	.116	.144	.173	.207	.242	.282	.369	.467

Panel Width Chart in Inche Dimensions are Outside to Outside of Bearing Bars.

Also Available in Stainless Steel

No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1/8" Bar	13/16	1 1/2	2 3/16	2 7/8	3 9/16	4 1/4	4 15/16	5 5/8	6 5/16	7	7 11/16	8 3/8	9 1/16	9 3/4	10 7/16	11 1/8	11 13/16	12 1/2
3/16" Bar	7/8	1 9/16	2 1/4	2 15/16	3 5/8	4 5/16	5	5 11/16	6 3/8	7 1/16	7 3/4	8 7/16	9 1/8	9 13/16	10 1/2	11 3/16	11 1/8	12 9/16
No. of Bars	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
1/8" Bar	13 3/16	13 7/8	14 3/16	15 1/4	15 15/16	16 5/8	17 3/16	18	18 11/16	19 3/8	20 1/16	20 3/4	21 1/16	22 13/16	23 3/2	24 3/16	24 7/8	
3/16" Bar	13 1/4	13 15/16	14 5/8	15 5/16	16	16 11/16	17 3/8	18 1/16	18 3/4	19 7/16	20 1/8	20 13/16	21 1/2	22 3/16	22 7/8	23 9/16	24 1/4	24 15/16
No. of Bars	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	
1/8" Bar	25 9/16	26 1/4	26 15/16	27 5/8	28 3/16	29	29 11/16	30 3/8	31 1/16	31 3/4	32 7/16	33 1/8	33 13/16	34 1/2	35 3/16	35 7/8	36 9/16	
3/16" Bar	25 5/8	26 5/16	27	27 11/16	28 7/8	29 1/8	29 3/4	30 7/16	31 1/8	31 13/16	32 1/2	33 3/16	33 7/8	34 9/16	35 1/4	35 15/16	36 5/8	

Maximum Available Panel Width: 2' - 0" (24 1/4") Maximum

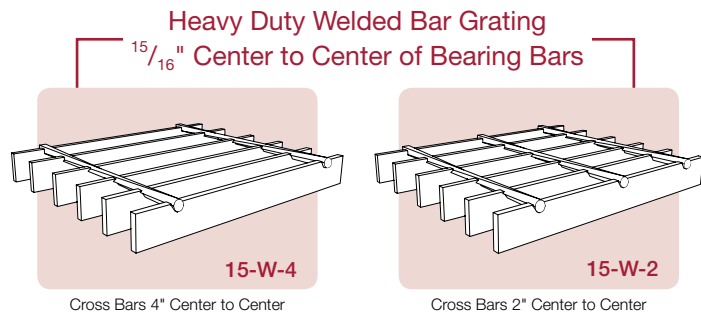
Carbon Steel Material: ASTM A-1011

LOADING TABLES (HEAVY DUTY)

15 Space Load Table

Heavy Duty $1\frac{5}{16}$ " C/C Bearing Bars
Non-Serrated & Serrated

U: Safe uniform load (psf)
C: Concentrated load (psf)



Bar Size	Type	Approx Weight psf	Sec Mod Per Ft of Width	Load Types	LOAD & DEFLECTION TABLE / SPAN (Direction of Bearing Bar)											
					24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"	
1" x 1/4"	15-W-4	11.7	0.533	U	1,778	1,138	790	580	444	351	284	235	198	145	111	
	15-W-2	12.4		C	1,778	1,422	1,185	1,016	889	790	711	646	593	508	444	
1" x 5/16"	15-W-4	14.9	0.667	U	2,222	1,422	988	726	556	439	356	294	247	181	139	
	15-W-2	16.1		C	2,222	1,778	1,481	1,270	1,111	988	889	808	741	635	556	
1-1/4" x 1/4"	15-W-4	14.5	0.833	U	2,778	1,778	1,235	907	694	549	444	367	309	227	174	
	15-W-2	15.1		C	2,778	2,222	1,852	1,587	1,389	1,235	1,111	1,010	926	794	694	
1-1/4" x 5/16"	15-W-4	18.4	1.042	U	3,472	2,222	1,543	1,134	868	686	556	459	386	283	217	
	15-W-2	19.6		C	3,472	2,778	2,315	1,984	1,736	1,543	1,389	1,263	1,157	992	868	
1-1/2" x 1/4"	15-W-4	17.3	1.200	U	4,000	2,560	1,778	1,306	1,000	790	640	529	444	327	250	
	15-W-2	17.9		C	4,000	3,200	2,667	2,286	2,000	1,778	1,600	1,455	1,333	1,143	1,000	
1-1/2" x 5/16"	15-W-4	21.9	1.500	U	5,000	3,200	2,222	1,633	1,250	988	800	661	556	408	313	
	15-W-2	23.1		C	5,000	4,000	3,333	2,857	2,500	2,222	2,000	1,818	1,667	1,429	1,250	
1-3/4" x 1/4"	15-W-4	20.1	1.633	U	5,444	3,484	2,420	1,778	1,361	1,075	871	720	605	444	340	
	15-W-2	20.7		C	5,444	4,356	3,630	3,111	2,722	2,420	2,178	1,980	1,815	1,556	1,361	
1-3/4" x 5/16"	15-W-4	25.3	2.042	U	6,806	4,356	3,025	2,222	1,701	1,344	1,089	900	756	556	425	
	15-W-2	26.8		C	6,806	5,444	4,537	3,889	3,403	3,025	2,722	2,475	2,269	1,944	1,701	
2" x 1/4"	15-W-4	22.8	2.133	U	7,111	4,551	3,160	2,322	1,778	1,405	1,138	940	790	580	444	
	15-W-2	23.5		C	7,111	5,689	4,741	4,063	3,556	3,160	2,844	2,586	2,370	2,032	1,778	
2" x 5/16"	15-W-4	28.8	2.667	U	8,889	5,689	3,951	2,902	2,222	1,756	1,422	1,175	988	726	556	
	15-W-2	29.9		C	8,889	7,111	5,926	5,079	4,444	3,951	3,556	3,232	2,963	2,540	2,222	
2-1/4" x 1/4"	15-W-4	25.6	2.700	U	9,000	5,760	4,000	2,939	2,250	1,778	1,440	1,190	1,000	735	563	
	15-W-2	26.3		C	9,000	7,200	6,000	5,143	4,500	4,000	3,600	3,273	3,000	2,571	2,250	
2-1/4" x 5/16"	15-W-4	32.3	3.375	U	11,250	7,200	5,000	3,673	2,813	2,222	1,800	1,488	1,250	918	703	
	15-W-2	33.4		C	11,250	9,000	7,500	6,429	5,625	5,000	4,500	4,091	3,750	3,214	2,813	
2-1/2" x 1/4"	15-W-4	28.4	3.333	U	11,111	7,111	4,938	3,628	2,778	2,195	1,778	1,469	1,235	907	694	
	15-W-2	29.1		C	11,111	8,889	7,407	6,349	5,556	4,938	4,444	4,040	3,704	3,175	2,778	
2-1/2" x 5/16"	15-W-4	35.7	4.167	U	13,889	8,889	6,173	4,535	3,472	2,743	2,222	1,837	1,543	1,134	868	
	15-W-2	36.9		C	13,889	11,111	9,259	7,937	6,944	6,173	5,556	5,051	4,630	3,968	3,472	
2-3/4" x 1/4"	15-W-4	31.2	4.033	U	13,444	8,604	5,975	4,390	3,361	2,656	2,151	1,778	1,494	1,098	840	
	15-W-2	31.8		C	13,444	10,756	8,963	7,683	6,722	5,975	5,378	4,889	4,481	3,841	3,361	
2-3/4" x 5/16"	15-W-4	39.6	5.042	U	16,806	10,756	7,469	5,488	4,201	3,320	2,689	2,222	1,867	1,372	1,050	
	15-W-2	41.1		C	16,806	13,444	11,204	9,603	8,403	7,469	6,722	6,111	5,602	4,802	4,201	
3" x 1/4"	15-W-4	34.4	4.800	U	16,000	10,240	7,111	5,224	4,000	3,160	2,560	2,116	1,778	1,306	1,000	
	15-W-2	35.5		C	16,000	12,800	10,667	9,143	8,000	7,111	6,400	5,818	5,333	4,571	4,000	
3" x 5/16"	15-W-4	43.1	6.000	U	20,000	12,800	8,889	6,531	5,000	3,951	3,200	2,645	2,222	1,633	1,250	
	15-W-2	44.6		C	20,000	16,000	13,333	11,429	10,000	8,889	8,000	7,273	6,667	5,714	5,000	

Note:

When gratings with serrated surface are specified,
the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables.

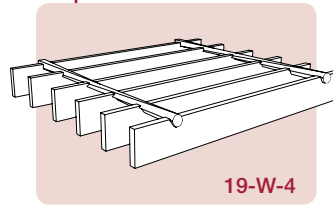
HEAVY DUTY STEEL BAR GRATING

19 Space Load Table

Heavy Duty $1\frac{3}{16}$ " C/C Bearing Bars
Non-Serrated & Serrated

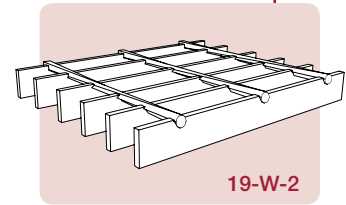
Heavy Duty Welded Bar Grating

$1\frac{3}{16}$ " Center to Center of Bearing Bars



19-W-4

Cross Bars 4" Center to Center



19-W-2

Cross Bars 2" Center to Center

U: Safe uniform load (psf)

C: Concentrated load (psf)

Bar Size	Type	Approx Weight psf	Sec Mod Per Ft of Width	Load Types	LOAD & DEFLECTION TABLE / SPAN (Direction of Bearing Bar)											
					24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"	
1" x 1/4"	19-W-4	9.5	0.421	U	1,404	898	624	458	351	277	225	186	156	115	88	
	19-W-2	10.1		C	1,404	1,123	936	802	702	624	561	510	468	401	351	
1" x 5/16"	19-W-4	12.1	0.526	U	1,754	1,123	780	573	439	347	281	232	195	143	110	
	19-W-2	13.3		C	1,754	1,404	1,170	1,003	877	780	702	638	585	501	439	
1-1/4" x 1/4"	19-W-4	11.7	0.658	U	2,193	1,404	975	716	548	433	351	290	244	179	137	
	19-W-2	12.3		C	2,193	1,754	1,462	1,253	1,096	975	877	797	731	627	548	
1-1/4" x 5/16"	19-W-4	14.3	0.822	U	2,741	1,754	1,218	895	685	541	439	362	305	224	171	
	19-W-2	16.0		C	2,741	2,193	1,827	1,566	1,031	1,218	1,096	997	914	783	685	
1-1/2" x 1/4"	19-W-4	13.9	0.947	U	3,158	2,021	1,404	1,031	789	624	505	418	351	258	197	
	19-W-2	14.5		C	3,158	2,526	2,105	1,805	1,579	1,404	1,263	1,148	1,053	902	789	
1-1/2" x 5/16"	19-W-4	17.8	1.184	U	3,947	2,526	1,754	1,289	987	780	632	522	439	322	247	
	19-W-2	18.8		C	3,947	3,158	2,632	2,256	1,974	1,754	1,579	1,435	1,316	1,128	987	
1-3/4" x 1/4"	19-W-4	16.1	1.289	U	4,298	2,751	1,910	1,404	1,075	849	688	568	478	351	269	
	19-W-2	16.7		C	4,298	3,439	2,865	2,456	2,149	1,910	1,719	1,563	1,433	1,228	1,075	
1-3/4" x 5/16"	19-W-4	20.4	1.612	U	5,373	3,439	2,388	1,754	1,343	1,061	860	710	597	439	336	
	19-W-2	21.5		C	5,373	4,298	3,582	3,070	2,686	2,388	2,149	1,954	1,791	1,535	1,343	
2" x 1/4"	19-W-4	18.3	1.684	U	5,614	3,593	2,495	1,833	1,404	1,109	898	742	624	458	351	
	19-W-2	18.9		C	5,614	4,491	3,743	3,208	2,807	2,495	2,246	2,041	1,871	1,604	1,404	
2" x 5/16"	19-W-4	23.1	2.105	U	7,018	4,491	3,119	2,291	1,754	1,386	1,123	928	780	573	439	
	19-W-2	24.6		C	7,018	5,614	4,678	4,010	3,509	3,119	2,807	2,552	2,339	2,005	1,754	
2-1/4" x 1/4"	19-W-4	20.5	2.132	U	7,105	4,547	3,158	2,320	1,776	1,404	1,137	940	789	580	444	
	19-W-2	21.1		C	7,105	5,684	4,737	4,060	3,553	3,158	2,842	2,584	2,368	2,030	1,776	
2-1/4" x 5/16"	19-W-4	25.9	2.664	U	8,882	5,684	3,947	2,900	2,220	1,754	1,421	1,174	987	725	555	
	19-W-2	27		C	8,882	7,105	5,921	5,075	4,441	3,947	3,553	3,230	2,961	2,538	2,220	
2-1/2" x 1/4"	19-W-4	22.7	2.632	U	8,772	5,614	3,899	2,864	2,193	1,733	1,404	1,160	975	716	548	
	19-W-2	23.3		C	8,772	7,018	5,848	5,013	4,386	3,899	3,509	3,190	2,924	2,506	2,193	
2-1/2" x 5/16"	19-W-4	28.6	3.289	U	10,965	7,018	4,873	3,580	2,741	2,166	1,754	1,450	1,218	895	685	
	19-W-2	29.8		C	10,965	8,772	7,310	6,266	5,482	4,873	4,386	3,987	3,655	3,133	2,741	
2-3/4" x 1/4"	19-W-4	24.9	3.184	U	10,614	6,793	4,717	3,466	2,654	2,097	1,698	1,404	1,179	866	663	
	19-W-2	25.6		C	10,614	8,491	7,076	6,065	5,307	4,717	4,246	3,860	3,538	3,033	2,654	
2-3/4" x 5/16"	19-W-4	31.8	3.980	U	13,268	8,491	5,897	4,332	3,317	2,621	2,123	1,754	1,474	1,083	829	
	19-W-2	33.3		C	13,268	10,614	8,845	7,581	6,634	5,897	5,307	4,825	4,423	3,791	3,317	
3" x 1/4"	19-W-4	27.8	3.789	U	12,632	8,084	5,614	4,125	3,158	2,495	2,021	1,670	1,404	1,031	789	
	19-W-2	28.7		C	12,632	10,105	8,421	7,218	6,316	5,614	5,053	4,593	4,211	3,609	3,158	
3" x 5/16"	19-W-4	34.5	4.737	U	15,789	10,105	7,018	5,156	3,947	3,119	2,526	2,088	1,754	1,289	987	
	19-W-2	36.1		C	15,789	12,632	10,526	9,023	7,895	7,018	6,316	5,742	5,263	4,511	3,947	

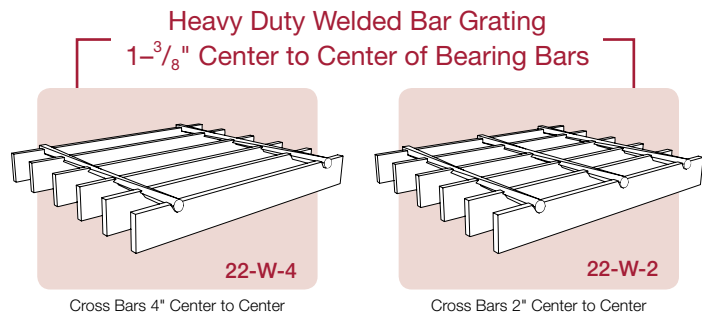
Note:

When gratings with serrated surface are specified,

the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables.

22 Space Load Table

Heavy Duty 1-³/₈" C/C Bearing Bars
Non-Serrated & Serrated



U: Safe uniform load (psf)

C: Concentrated load (psf)

Bar Size	Type	Approx Weight psf	Sec Mod Per Ft of Width	Load Types	LOAD & DEFLECTION TABLE / SPAN (Direction of Bearing Bar)										
					24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"
1" x 1/4"	22-W-4	8.3	0.364	U	1,212	776	539	396	303	239	194	160	135	99	76
	22-W-2	9.0		C	1,212	970	808	693	606	539	485	441	404	346	303
1" x 5/16"	22-W-4	10.7	0.455	U	1,515	970	673	495	379	299	242	200	168	124	95
	22-W-2	11.8		C	1,515	1,212	1,010	866	758	673	606	551	505	433	379
1-1/4" x 1/4"	22-W-4	10.2	0.568	U	1,894	1,212	842	618	473	374	303	250	210	155	118
	22-W-2	10.9		C	1,894	1,515	1,263	1,082	947	842	758	689	631	541	473
1-1/4" x 5/16"	22-W-4	13.1	0.710	U	2,367	1,515	1,052	773	592	468	379	313	263	193	148
	22-W-2	14.2		C	2,367	1,894	1,578	1,353	1,184	1,052	947	861	789	676	592
1-1/2" x 1/4"	22-W-4	12.1	0.818	U	2,727	1,745	1,212	891	682	539	436	361	303	223	170
	22-W-2	12.8		C	2,727	2,182	1,818	1,558	1,364	1,212	1,091	992	909	779	682
1-1/2" x 5/16"	22-W-4	15.4	1.023	U	3,409	2,182	1,515	1,113	852	673	545	451	379	278	213
	22-W-2	16.8		C	3,409	2,727	2,273	1,948	1,705	1,515	1,364	1,240	1,136	974	852
1-3/4" x 1/4"	22-W-4	14.0	1.114	U	3,712	2,376	1,650	1,212	928	733	594	491	412	303	232
	22-W-2	14.7		C	3,712	2,970	2,475	2,121	1,856	1,650	1,485	1,350	1,237	1,061	928
1-3/4" x 5/16"	22-W-4	17.8	1.392	U	4,640	2,970	2,062	1,515	1,160	917	742	614	516	379	290
	22-W-2	19.0		C	4,640	3,712	3,093	2,652	2,320	2,062	1,856	1,687	1,547	1,326	1,160
2" x 1/4"	22-W-4	16.0	1.455	U	4,848	3,103	2,155	1,583	1,212	958	776	641	539	396	303
	22-W-2	16.6		C	4,848	3,879	3,232	2,771	2,424	2,155	1,939	1,763	1,616	1,385	1,212
2" x 5/16"	22-W-4	20.2	1.818	U	6,061	3,879	2,694	1,979	1,515	1,197	970	801	673	495	379
	22-W-2	21.3		C	6,061	4,848	4,040	3,463	3,030	2,694	2,424	2,204	2,020	1,732	1,515
2-1/4" x 1/4"	22-W-4	17.9	1.841	U	6,136	3,927	2,727	2,004	1,534	1,212	982	811	682	501	384
	22-W-2	18.5		C	6,136	4,909	4,091	3,506	3,068	2,727	2,455	2,231	2,045	1,753	1,534
2-1/4" x 5/16"	22-W-4	22.6	2.301	U	7,670	4,909	3,409	2,505	1,918	1,515	1,227	1,014	852	626	479
	22-W-2	23.7		C	7,670	6,136	5,114	4,383	3,835	3,409	3,068	2,789	2,557	2,192	1,918
2-1/2" x 1/4"	22-W-4	19.8	2.273	U	7,576	4,848	3,367	2,474	1,894	1,496	1,212	1,002	842	618	473
	22-W-2	20.4		C	7,576	6,061	5,051	4,329	3,788	3,367	3,030	2,755	2,525	2,165	1,894
2-1/2" x 5/16"	22-W-4	25.0	2.841	U	9,470	6,061	4,209	3,092	2,367	1,871	1,515	1,252	1,052	773	592
	22-W-2	26.1		C	9,470	7,576	6,313	5,411	4,735	4,209	3,788	3,444	3,157	2,706	2,367
2-3/4" x 1/4"	22-W-4	21.7	2.750	U	9,167	5,867	4,074	2,993	2,292	1,811	1,467	1,212	1,019	748	573
	22-W-2	22.3		C	9,167	7,333	6,111	5,238	4,583	4,074	3,667	3,333	3,056	2,619	2,292
2-3/4" x 5/16"	22-W-4	27.8	3.438	U	11,458	7,333	5,093	3,741	2,865	2,263	1,833	1,515	1,273	935	716
	22-W-2	29.3		C	11,458	9,167	7,639	6,548	5,729	5,093	4,583	4,167	3,819	3,274	2,865
3" x 1/4"	15-W-4	24.1	3.273	U	10,909	6,982	4,848	3,562	2,727	2,155	1,745	1,443	1,212	891	682
	15-W-2	25.2		C	10,909	8,727	7,273	6,234	5,455	4,848	4,364	3,967	3,636	3,117	2,727
3" x 5/16"	15-W-4	30.2	4.091	U	13,636	8,727	6,061	4,553	3,409	2,694	2,182	1,803	1,515	1,113	852
	15-W-2	31.7		C	13,636	10,909	9,091	7,792	6,818	6,061	5,455	4,959	4,545	3,896	3,409

Note:

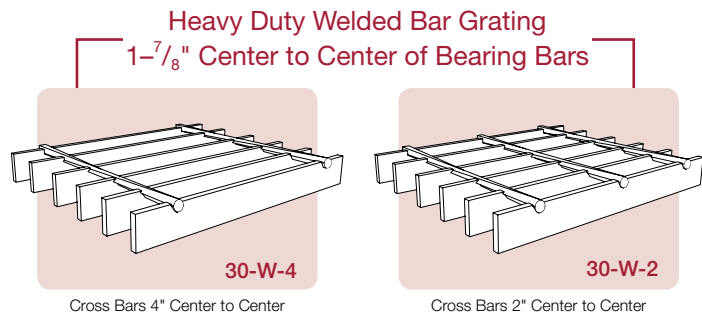
When gratings with serrated surface are specified,

the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables.

HEAVY DUTY STEEL BAR GRATING

30 Space Load Table

Heavy Duty $1\frac{7}{8}$ " C/C Bearing Bars
Non-Serrated & Serrated



U: Safe uniform load (psf)

C: Concentrated load (psf)

Bar Size	Type	Approx Weight psf	Sec Mod Per Ft of Width	Load Types	LOAD & DEFLECTION TABLE / SPAN (Direction of Bearing Bar)												
					24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"		
1" x 1/4"	30-W-4	6.3	0.267	U	889	569	395	290	222	176	142	118	99	73	56		
	30-W-2	7.0		C	889	711	593	508	444	395	356	323	296	254	222		
1" x 5/16"	30-W-4	8.2	0.333	U	1,111	711	494	363	278	219	178	147	123	91	69		
	30-W-2	9.4		C	1,111	889	741	635	556	494	444	404	370	317	278		
1-1/4" x 1/4"	30-W-4	7.8	0.417	U	1,389	889	617	454	347	274	222	184	154	113	87		
	30-W-2	8.4		C	1,389	1,111	926	794	694	617	556	505	463	397	347		
1-1/4" x 5/16"	30-W-4	10.0	0.521	U	1,736	1,111	772	567	434	343	278	230	193	142	109		
	30-W-2	11.1		C	1,736	1,389	1,157	992	868	772	694	631	579	496	434		
1-1/2" x 1/4"	30-W-4	9.2	0.600	U	2,000	1,280	889	653	500	395	320	264	222	163	125		
	30-W-2	9.8		C	2,000	1,600	1,333	1,143	1,000	889	800	727	667	571	500		
1-1/2" x 5/16"	30-W-4	11.8	0.750	U	2,500	1,600	1,111	816	625	494	400	331	278	204	156		
	30-W-2	12.9		C	2,500	2,000	1,667	1,429	1,250	1,111	1,000	909	833	714	625		
1-3/4" x 1/4"	30-W-4	10.6	0.817	U	2,722	1,742	1,210	889	681	538	436	360	302	222	170		
	30-W-2	11.3		C	2,722	2,178	1,815	1,556	1,361	1,210	1,089	990	907	778	681		
1-3/4" x 5/16"	30-W-4	13.6	1.021	U	3,403	2,178	1,512	1,111	851	672	544	450	378	278	213		
	30-W-2	14.7		C	3,403	2,722	2,269	1,944	1,701	1,512	1,361	1,237	1,134	972	851		
2" x 1/4"	30-W-4	12.0	1.067	U	3,556	2,276	1,580	1,161	889	702	569	470	395	290	222		
	30-W-2	12.7		C	3,556	2,844	2,370	2,032	1,778	1,580	1,422	1,293	1,185	1,016	889		
2" x 5/16"	30-W-4	15.3	1.333	U	4,444	2,844	1,975	1,451	1,111	878	711	588	494	363	278		
	30-W-2	16.5		C	4,444	3,556	2,963	2,540	2,222	1,975	1,778	1,616	1,481	1,270	1,111		
2-1/4" x 1/4"	30-W-4	13.6	1.350	U	4,500	2,880	2,000	1,469	1,125	889	720	595	500	367	281		
	30-W-2	14.1		C	4,500	3,600	3,000	2,571	2,250	2,000	1,800	1,636	1,500	1,286	1,125		
2-1/4" x 5/16"	30-W-4	17.1	1.688	U	5,625	3,600	2,500	1,837	1,406	1,111	900	744	625	459	352		
	30-W-2	18.3		C	5,625	4,500	3,750	3,214	2,813	2,500	2,250	2,045	1,875	1,607	1,406		
2-1/2" x 1/4"	30-W-4	14.9	1.667	U	5,556	3,556	2,469	1,814	1,389	1,097	889	735	617	454	347		
	30-W-2	15.3		C	5,556	4,444	3,704	3,175	2,778	2,469	2,222	2,020	1,852	1,587	1,389		
2-1/2" x 5/16"	30-W-4	18.9	2.083	U	6,944	4,444	3,086	2,268	1,736	1,372	1,111	918	772	567	434		
	30-W-2	20.0		C	6,944	5,556	4,630	3,968	3,472	3,086	2,778	2,525	2,315	1,984	1,736		
2-3/4" x 1/4"	30-W-4	16.3	2.017	U	6,722	4,302	2,988	2,195	1,681	1,328	1,076	889	747	549	420		
	30-W-2	17.0		C	6,722	5,378	4,481	3,841	3,361	2,988	2,689	2,444	2,241	1,921	1,681		
2-3/4" x 5/16"	30-W-4	21.0	2.521	U	8,403	5,378	3,735	2,744	2,101	1,660	1,344	1,111	934	686	525		
	30-W-2	22.6		C	8,403	6,722	5,602	4,802	4,201	3,735	3,361	3,056	2,801	2,401	2,101		
3" x 1/4"	30-W-4	18.2	2.400	U	8,000	5,120	3,556	2,612	2,000	1,580	1,280	1,058	889	653	500		
	30-W-2	19.3		C	8,000	6,400	5,333	4,571	4,000	3,556	3,200	2,909	2,667	2,286	2,000		
3" x 5/16"	30-W-4	22.8	3.000	U	10,000	6,400	4,444	3,265	2,500	1,975	1,600	1,322	1,111	816	625		
	30-W-2	24.4		C	10,000	8,000	6,667	5,714	5,000	4,444	4,000	3,636	3,333	2,857	2,500		

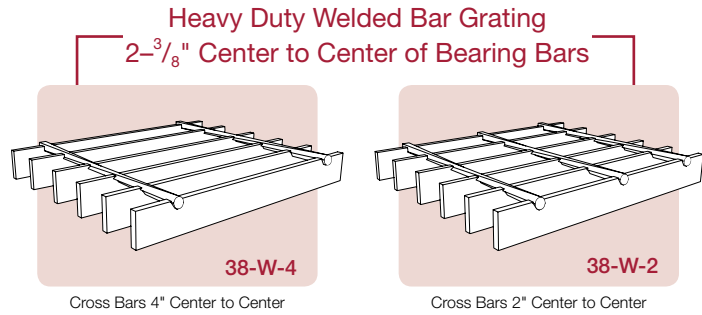
Note:

When gratings with serrated surface are specified,

the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables.

38 Space Load Table

Heavy Duty 2-³/₈" C/C Bearing Bars
Non-Serrated & Serrated



U: Safe uniform load (psf)

C: Concentrated load (psf)

Bar Size	Type	Approx Weight psf	Sec Mod Per Ft of Width	Load Types	LOAD & DEFLECTION TABLE / SPAN (Direction of Bearing Bar)										
					24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"
1" x 1/4"	38-W-4	5.2	0.211	U	702	449	312	229	175	139	112	93	78	57	44
	38-W-2	5.9		C	702	561	468	401	351	312	281	255	234	201	175
1" x 5/16"	38-W-4	6.8	0.263	U	877	561	390	286	219	173	140	116	97	72	55
	38-W-2	7.9		C	877	702	585	501	439	390	351	319	292	251	219
1-1/4" x 1/4"	38-W-4	8.3	0.329	U	1,096	702	487	358	274	217	175	145	122	90	69
	38-W-2	7.0		C	1,096	877	731	627	548	487	439	399	365	313	274
1-1/4" x 5/16"	38-W-4	8.2	0.411	U	1,371	877	609	448	343	271	219	181	152	112	86
	38-W-2	9.4		C	1,371	1,096	914	783	685	609	548	498	457	392	343
1-1/2" x 1/4"	38-W-4	7.5	0.474	U	1,579	1,011	702	516	395	312	253	209	175	129	99
	38-W-2	8.1		C	1,579	1,263	1,053	902	789	702	632	574	526	451	395
1-1/2" x 5/16"	38-W-4	9.6	0.592	U	1,974	1,263	877	644	493	390	316	261	219	161	123
	38-W-2	10.8		C	1,974	1,579	1,316	1,128	987	877	789	718	658	564	493
1-3/4" x 1/4"	38-W-4	8.6	0.645	U	2,149	1,375	955	702	537	425	344	284	239	175	134
	38-W-2	9.3		C	2,149	1,719	1,433	1,228	1,075	955	860	781	716	614	537
1-3/4" x 5/16"	38-W-4	11.1	0.806	U	2,686	1,719	1,194	877	672	531	430	355	298	219	168
	38-W-2	12.2		C	2,686	2,149	1,791	1,535	1,343	1,194	1,075	977	895	768	672
2" x 1/4"	38-W-4	9.8	0.842	U	2,807	1,796	1,248	917	702	554	449	371	312	229	175
	38-W-2	10.4		C	2,807	2,246	1,871	1,604	1,404	1,248	1,123	1,021	936	802	702
2" x 5/16"	38-W-4	12.5	1.053	U	3,509	2,246	1,559	1,146	877	693	561	464	390	286	219
	38-W-2	13.6		C	3,509	2,807	2,339	2,005	1,754	1,559	1,404	1,276	1,170	1,003	877
2-1/4" x 1/4"	38-W-4	10.9	1.066	U	3,553	2,274	1,579	1,160	888	702	568	470	395	290	222
	38-W-2	11.5		C	3,553	2,842	2,368	2,030	1,776	1,579	1,421	1,292	1,184	1,015	888
2-1/4" x 5/16"	38-W-4	13.9	1.332	U	4,441	2,842	1,974	1,450	1,110	877	711	587	493	363	278
	38-W-2	15.0		C	4,441	3,553	2,961	2,538	2,220	1,974	1,776	1,615	1,480	1,269	1,110
2-1/2" x 1/4"	38-W-4	12.0	1.316	U	4,386	2,807	1,949	1,432	1,096	866	702	580	487	358	274
	38-W-2	12.7		C	4,386	3,509	2,924	2,506	2,193	1,949	1,754	1,595	1,462	1,253	1,096
2-1/2" x 5/16"	38-W-4	15.3	1.645	U	5,482	3,509	2,437	1,790	1,371	1,083	877	725	609	448	343
	38-W-2	16.5		C	5,482	4,386	3,655	3,133	2,741	2,437	2,193	1,994	1,827	1,566	1,371
2-3/4" x 1/4"	38-W-4	13.2	1.592	U	5,307	3,396	2,359	1,733	1,327	1,048	849	702	590	433	332
	38-W-2	13.8		C	5,307	4,246	3,538	3,033	2,654	2,359	2,123	1,930	1,769	1,516	1,327
2-3/4" x 5/16"	38-W-4	17.2	1.990	U	6,634	4,246	2,948	2,166	1,658	1,310	1,061	877	737	542	415
	38-W-2	18.7		C	6,634	5,307	4,423	3,791	3,317	2,948	2,654	2,412	2,211	1,895	1,658
3" x 1/4"	38-W-4	14.9	1.895	U	6,316	4,042	2,807	2,062	1,579	1,248	1,011	835	702	516	395
	38-W-2	15.9		C	6,316	5,053	4,211	3,609	3,158	2,807	2,526	2,297	2,105	1,805	1,579
3" x 5/16"	38-W-4	18.6	2.368	U	7,895	5,053	3,509	2,578	1,974	1,559	1,263	1,044	877	644	493
	38-W-2	20.1		C	7,895	6,316	5,263	4,511	3,947	3,509	3,158	2,871	2,632	2,256	1,974

Note:

When gratings with serrated surface are specified,

the depth of the grating required for a specific load will be 1/4" greater than that shown in these tables.

HEAVY DUTY STEEL BAR GRATING

The following shows the capacities on the basis of vehicular load distribution and concentrated loading per foot of grating width for a given span.

Notes:

- a) For continuous spans, use continuity factor = .80
- b) This distribution results in larger grating sizes for lighter trucks on shorter spans. Spans shown for H15/H20 reflect the more critical condition.
- c) The fork lift wheel loads and load distribution patterns depicted below, generally and only partially represent the broad range of rubber-tired lift trucks available.
- d) Wheeled vehicles with urethane tires should NEVER be used in conjunction with open grid bar grating.
- e) HS20 is the same as H-20 and HS15 is the same as H-15. The " S" stands for semi-trailer.

EQUATION VARIABLES

M = Bending Moment

S = Section Modulus - in³/ foot of grating width

I = Moment of Inertia - in⁴/ bar

E = Modulus of Elasticity (29,000,000 psi)

F = Allowable Bending Stress (20,000 psi)

ψ = Clear, Simple Span - inches

D = Deflection (inches)

a = Partial Load Contact Parallel to Span - inches

s = Center-to-Center Spacing Between Bearing Bars -

inches b = Partial Load Contact Dimension at 90° to Span - inches

b = a + (2s)

P = Total Wheel or Partial Load including Impact - Pounds

P₁ = P per bearing bar

P₁ = P x (s/b)

Step 1: Determine M

$$M = FS/12$$

Step 2: Substituting for M

$$(i) a > \psi \quad (ii) a < \psi$$

Solve for ψ:

$$M = \frac{P\psi^2}{8ab}$$

$$M = \frac{P(.25\psi - .125a)}{b}$$

Step 3: Check D*

$$D = \frac{P1[(2\psi^3) - (a^2\psi) + (a^3/4)]}{8ab}$$

*Deflection should be limited to 1/400 Span

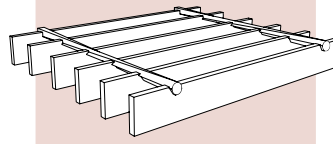
Maximum Traffic Conditions		Wheel Load in Pounds (1/2 Axle Load + 30% impact)	Loading	Load Distribution	
				a	b
	Truck Traffic 40,000 pound Axle Load Dual Wheels	26,000	H-25	25"	25" + (2s)
	Truck Traffic 32,000 pound Axle Load Dual Wheels	20,800	H-20	20"	20" + (2s)
	Truck Traffic 24,000 pound Axle Load Dual Wheels	15,600	H-15	15"	15" + (2s)
 Rubber Tires	10,000 Pound Capacity Lift Truck 14,400 Pound Vehicle 24,400 Pound Total Load 85% Drive Axle Load	13,480	5 Ton	11"	11" + (2s)
 Rubber Tires	6,000 Pound Capacity Lift Truck 9,800 Pound Vehicle 15,800 Pound Total Load 85% Drive Axle Load	8,730	3 Ton	7"	7" + (2s)
 Rubber Tires	2,000 Pound Capacity Lift Truck 4,200 Pound Vehicle 6,200 Pound Total Load 85% Drive Axle Load	3,425	1 Ton	4"	4" + (2s)

15 Space Load Table

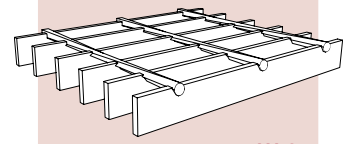
Heavy Duty $1\frac{5}{16}$ " C/C Bearing Bars
Non-Serrated & Serrated

Heavy Duty Welded Bar Grating

$1\frac{5}{16}$ " Center to Center of Bearing Bars



15-W-4



15-W-2



H-25 Load



H-20 Load



H-15 Load



Auto Traffic



5 Ton Forklift



3 Ton Forklift



1 Ton Forklift

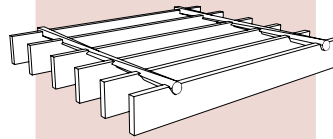
Bar Size	Section Modulus psf	Moment of Inertia psf	Approx Weight psf	Maximum Safe Span						
				H-25 Load	H-20 Load	H-15 Load	Auto Traffic	5 Ton Forklift	3 Ton Forklift	1 Ton Forklift
1" x 1/4"	0.533	0.267	12.0	1'-1"	1'-0"	0'-10"	1'-2"	0'-8"	0'-7"	0'-8"
1" x 5/16"	0.667	0.333	14.7	1'-3"	1'-2"	1'-0"	1'-5"	0'-9"	0'-8"	0'-9"
1-1/4" x 1/4"	0.833	0.521	14.7	1'-4"	1'-3"	1'-1"	1'-8"	0'-10"	0'-9"	0'-11"
1-1/4" x 5/16"	1.042	0.651	18.1	1'-6"	1'-5"	1'-3"	1'-11"	1'-0"	0'-10"	1'-1"
1-1/2" x 1/4"	1.200	0.900	17.4	1'-8"	1'-6"	1'-4"	2'-3"	1'-1"	0'-11"	1'-3"
1-1/2" x 5/16"	1.500	1.125	21.5	1'-10"	1'-8"	1'-6"	2'-6"	1'-3"	1'-1"	1'-7"
1-3/4" x 1/4"	1.633	1.429	20.2	1'-11"	1'-9"	1'-7"	2'-10"	1'-3"	1'-2"	1'-8"
1-3/4" x 5/16"	2.042	1.786	24.9	2'-2"	2'-0"	1'-10"	3'-2"	1'-6"	1'-5"	2'-1"
2" x 1/4"	2.133	2.133	22.9	2'-3"	2'-0"	1'-10"	3'-6"	1'-7"	1'-5"	2'-2"
2" x 5/16"	2.667	2.667	28.3	2'-6"	2'-4"	2'-2"	3'-11"	1'-10"	1'-9"	2'-8"
2-1/4" x 1/4"	2.700	3.038	25.6	2'-7"	2'-4"	2'-2"	4'-2"	1'-10"	1'-9"	2'-8"
2-1/4" x 5/16"	3.375	3.797	31.7	2'-11"	2'-9"	2'-7"	4'-5"	2'-2"	2'-2"	3'-4"
2-1/2" x 1/4"	3.333	4.167	28.3	2'-11"	2'-9"	2'-7"	4'-7"	2'-2"	2'-2"	3'-4"
2-1/2" x 5/16"	4.167	5.208	35.1	3'-5"	3'-3"	3'-1"	4'-11"	2'-8"	2'-7"	4'-1"
3" x 1/4"	4.800	7.200	33.8	3'-9"	3'-7"	3'-6"	5'-6"	3'-0"	3'-0"	4'-8"
3" x 5/16"	6.000	9.000	41.9	4'-5"	4'-4"	4'-2"	5'-11"	3'-7"	3'-8"	5'-0"

19 Space Load Table

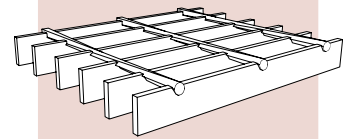
Heavy Duty $1\frac{3}{16}$ " C/C Bearing Bars
Non-Serrated & Serrated

Heavy Duty Welded Bar Grating

$1\frac{3}{16}$ " Center to Center of Bearing Bars



19-W-4



19-W-2



H-25 Load



H-20 Load



H-15 Load



Auto Traffic



5 Ton Forklift



3 Ton Forklift



1 Ton Forklift

Bar Size	Section Modulus psf	Moment of Inertia psf	Approx Weight psf	Maximum Safe Span						
				H-25 Load	H-20 Load	H-15 Load	Auto Traffic	5 Ton Forklift	3 Ton Forklift	1 Ton Forklift
1" x 1/4"	0.421	0.211	9.7	1'-0"	0'-10"	0'-9"	1'-0"	0'-7"	0'-6"	0'-7"
1" x 5/16"	0.526	0.263	11.9	1'-1"	1'-0"	0'-10"	1'-2"	0'-8"	0'-7"	0'-8"
1-1/4" x 1/4"	0.658	0.411	11.9	1'-3"	1'-1"	1'-0"	1'-5"	0'-9"	0'-8"	0'-10"
1-1/4" x 5/16"	0.822	0.514	14.5	1'-4"	1'-3"	1'-1"	1'-8"	0'-10"	0'-9"	1'-0"
1-1/2" x 1/4"	0.947	0.711	14.0	1'-6"	1'-4"	1'-2"	1'-11"	0'-11"	0'-10"	1'-1"
1-1/2" x 5/16"	1.184	0.888	17.2	1'-8"	1'-6"	1'-4"	2'-3"	1'-1"	0'-11"	1'-4"
1-3/4" x 1/4"	1.289	1.128	16.2	1'-9"	1'-7"	1'-5"	2'-5"	1'-2"	1'-0"	1'-5"
1-3/4" x 5/16"	1.612	1.410	19.9	1'-11"	1'-9"	1'-7"	2'-11"	1'-4"	1'-3"	1'-9"
2" x 1/4"	1.684	1.684	18.3	2'-0"	1'-10"	1'-8"	3'-1"	1'-4"	1'-3"	1'-10"
2" x 5/16"	2.105	2.105	22.6	2'-3"	2'-1"	1'-11"	3'-6"	1'-7"	1'-6"	2'-4"
2-1/4" x 1/4"	2.132	2.398	20.4	2'-3"	2'-1"	1'-11"	3'-9"	1'-7"	1'-6"	2'-4"
2-1/4" x 5/16"	2.664	2.998	25.3	2'-7"	2'-5"	2'-3"	4'-2"	1'-11"	1'-10"	2'-11"
2-1/2" x 1/4"	2.632	3.289	22.6	2'-6"	2'-4"	2'-3"	4'-4"	1'-10"	1'-10"	2'-10"
2-1/2" x 5/16"	3.289	4.112	28.0	2'-11"	2'-9"	2'-7"	4'-8"	2'-3"	2'-3"	3'-6"
3" x 1/4"	3.789	5.684	26.9	3'-3"	3'-1"	2'-11"	5'-2"	2'-6"	2'-6"	4'-1"
3" x 5/16"	4.737	7.105	33.3	3'-9"	3'-7"	3'-6"	5'-7"	3'-0"	3'-1"	4'-9"

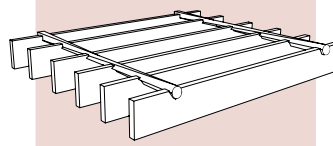
HEAVY DUTY STEEL BAR GRATING

Heavy Duty Welded Bar Grating

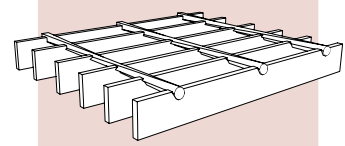
1-³/₈" Center to Center of Bearing Bars

22 Space Load Table

Heavy Duty 1-³/₈" C/C Bearing Bars
Non-Serrated & Serrated



20-W-4



20-W-2



H-25 Load



H-20 Load



H-15 Load



Auto Traffic



5 Ton Forklift



3 Ton Forklift



1 Ton Forklift

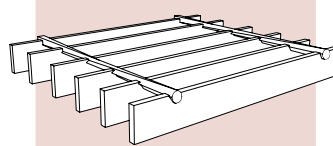
Bar Size	Section Modulus psf	Moment of Inertia psf	Approx Weight psf	Maximum Safe Span						
				H-25 Load	H-20 Load	H-15 Load	Auto Traffic	5 Ton Forklift	3 Ton Forklift	1 Ton Forklift
1" x 1/4"	0.364	0.182	8.5	0'-11"	0'-10"	0'-9"	0'-11"	0'-7"	0'-6"	0'-6"
1" x 5/16"	0.455	0.227	10.4	1'-0"	0'-11"	0'-10"	1'-1"	0'-8"	0'-6"	0'-7"
1-1/4" x 1/4"	0.568	0.355	10.4	1'-2"	1'-0"	0'-11"	1'-4"	0'-9"	0'-7"	0'-9"
1-1/4" x 5/16"	0.710	0.444	12.7	1'-3"	1'-2"	1'-0"	1'-6"	0'-10"	0'-8"	0'-11"
1-1/2" x 1/4"	0.818	0.614	12.2	1'-5"	1'-3"	1'-1"	1'-9"	0'-11"	0'-9"	1'-0"
1-1/2" x 5/16"	1.023	0.767	15.0	1'-7"	1'-5"	1'-3"	2'-1"	1'-0"	0'-11"	1'-3"
1-3/4" x 1/4"	1.114	0.974	14.1	1'-8"	1'-6"	1'-3"	2'-3"	1'-1"	0'-11"	1'-4"
1-3/4" x 5/16"	1.392	1.218	17.3	1'-10"	1'-8"	1'-6"	2'-8"	1'-2"	1'-1"	1'-8"
2" x 1/4"	1.455	1.455	16.0	1'-10"	1'-8"	1'-6"	2'-10"	1'-3"	1'-2"	1'-9"
2" x 5/16"	1.818	1.818	19.7	2'-1"	1'-11"	1'-9"	3'-4"	1'-5"	1'-5"	2'-1"
2-1/4" x 1/4"	1.841	2.071	17.8	2'-1"	1'-11"	1'-9"	3'-5"	1'-6"	1'-5"	2'-2"
2-1/4" x 5/16"	2.301	2.589	22.0	2'-4"	2'-2"	2'-0"	4'-0"	1'-9"	1'-8"	2'-8"
2-1/2" x 1/4"	2.273	2.841	19.7	2'-4"	2'-2"	2'-0"	4'-2"	1'-8"	1'-8"	2'-7"
2-1/2" x 5/16"	2.841	3.551	24.3	2'-8"	2'-6"	2'-5"	4'-6"	2'-0"	2'-0"	3'-3"
3" x 1/4"	3.273	4.909	23.4	2'-11"	2'-9"	2'-8"	5'-0"	2'-3"	2'-3"	3'-8"
3" x 5/16"	4.091	6.136	28.9	3'-5"	3'-3"	3'-2"	5'-4"	2'-9"	2'-9"	4'-7"

Heavy Duty Welded Bar Grating

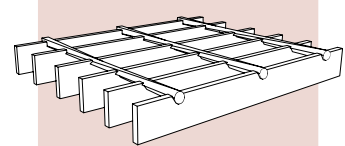
1-⁷/₈" Center to Center of Bearing Bars

30 Space Load Table

Heavy Duty 1-⁷/₈" C/C Bearing Bars
Non-Serrated & Serrated



30-W-4



30-W-2



H-25 Load



H-20 Load



H-15 Load



Auto Traffic



5 Ton Forklift



3 Ton Forklift



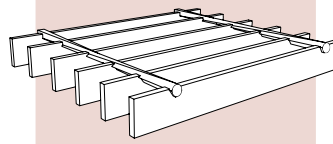
1 Ton Forklift

Bar Size	Section Modulus psf	Moment of Inertia psf	Approx Weight psf	Maximum Safe Span						
				H-25 Load	H-20 Load	H-15 Load	Auto Traffic	5 Ton Forklift	3 Ton Forklift	1 Ton Forklift
1" x 1/4"	0.267	0.133	6.6	0'-9"	0'-9"	0'-8"	0'-10"	0'-6"	0'-5"	0'-6"
1" x 5/16"	0.333	0.167	7.9	0'-11"	0'-10"	0'-8"	0'-11"	0'-7"	0'-6"	0'-7"
1-1/4" x 1/4"	0.417	0.260	7.9	1'-0"	0'-11"	0'-10"	1'-1"	0'-8"	0'-6"	0'-8"
1-1/4" x 5/16"	0.521	0.326	9.6	1'-1"	1'-0"	0'-11"	1'-3"	0'-9"	0'-7"	0'-9"
1-1/2" x 1/4"	0.600	0.450	9.3	1'-2"	1'-1"	1'-0"	1'-5"	0'-9"	0'-8"	0'-11"
1-1/2" x 5/16"	0.750	0.563	11.3	1'-4"	1'-3"	1'-1"	1'-9"	0'-10"	0'-9"	1'-1"
1-3/4" x 1/4"	0.817	0.715	10.6	1'-5"	1'-3"	1'-2"	1'-10"	0'-11"	0'-10"	1'-2"
1-3/4" x 5/16"	1.021	0.893	13.0	1'-7"	1'-5"	1'-3"	2'-2"	1'-0"	0'-11"	1'-5"
2" x 1/4"	1.067	1.067	12.0	1'-7"	1'-6"	1'-4"	2'-3"	1'-1"	1'-0"	1'-6"
2" x 5/16"	1.333	1.333	14.7	1'-10"	1'-8"	1'-6"	2'-9"	1'-3"	1'-2"	1'-10"
2-1/4" x 1/4"	1.350	1.519	13.4	1'-10"	1'-8"	1'-6"	2'-10"	1'-3"	1'-2"	1'-10"
2-1/4" x 5/16"	1.688	1.898	16.4	2'-0"	1'-10"	1'-9"	3'-5"	1'-5"	1'-5"	2'-3"
2-1/2" x 1/4"	1.667	2.083	14.7	2'-0"	1'-10"	1'-8"	3'-5"	1'-5"	1'-5"	2'-3"
2-1/2" x 5/16"	2.083	2.604	18.1	2'-3"	2'-1"	2'-0"	4'-2"	1'-8"	1'-8"	2'-9"
3" x 1/4"	2.400	3.600	17.4	2'-6"	2'-4"	2'-2"	4'-7"	1'-11"	1'-11"	3'-2"
3" x 5/16"	3.000	4.500	21.5	2'-10"	2'-8"	2'-7"	5'-0"	2'-3"	2'-4"	3'-11"

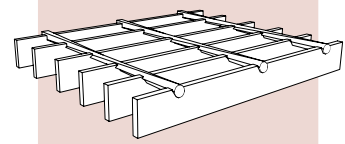
38 Space Load Table

Heavy Duty 2-³/₈" C/C Bearing Bars
Non-Serrated & Serrated

Heavy Duty Welded Bar Grating
2-³/₈" Center to Center of Bearing Bars



38-W-4



38-W-2



H-25 Load



H-20 Load



H-15 Load



Auto Traffic



5 Ton Forklift



3 Ton Forklift



1 Ton Forklift

Bar Size	Section Modulus psf	Moment of Inertia psf	Approx Weight psf	Maximum Safe Span						
				H-25 Load	H-20 Load	H-15 Load	Auto Traffic	5 Ton Forklift	3 Ton Forklift	1 Ton Forklift
1" x 1/4"	0.211	0.105	5.4	0'-8"	0'-8"	0'-7"	0'-9"	0'-6"	0'-5"	0'-5"
1" x 5/16"	0.263	0.132	6.5	0'-10"	0'-9"	0'-8"	0'-10"	0'-6"	0'-5"	0'-6"
1-1/4" x 1/4"	0.329	0.206	6.5	0'-11"	0'-10"	0'-9"	1'-0"	0'-8"	0'-6"	0'-7"
1-1/4" x 5/16"	0.411	0.257	7.8	1'-0"	0'-11"	0'-10"	1'-2"	0'-8"	0'-7"	0'-9"
1-1/2" x 1/4"	0.474	0.355	7.6	1'-1"	1'-0"	0'-10"	1'-3"	0'-9"	0'-7"	0'-10"
1-1/2" x 5/16"	0.592	0.444	9.2	1'-3"	1'-1"	1'-0"	1'-6"	0'-10"	0'-8"	1'-0"
1-3/4" x 1/4"	0.645	0.564	8.6	1'-4"	1'-2"	1'-0"	1'-7"	0'-10"	0'-9"	1'-0"
1-3/4" x 5/16"	0.806	0.705	10.5	1'-5"	1'-3"	1'-2"	1'-11"	0'-11"	0'-10"	1'-3"
2" x 1/4"	0.842	0.842	9.7	1'-5"	1'-4"	1'-2"	2'-0"	1'-0"	0'-11"	1'-4"
2" x 5/16"	1.053	1.053	11.9	1'-8"	1'-6"	1'-4"	2'-5"	1'-1"	1'-0"	1'-7"
2-1/4" x 1/4"	1.066	1.199	10.8	1'-8"	1'-6"	1'-4"	2'-5"	1'-1"	1'-1"	1'-8"
2-1/4" x 5/16"	1.332	1.499	13.2	1'-10"	1'-8"	1'-6"	3'-0"	1'-3"	1'-3"	2'-0"
2-1/2" x 1/4"	1.316	1.645	11.9	1'-10"	1'-8"	1'-6"	2'-11"	1'-3"	1'-3"	2'-0"
2-1/2" x 5/16"	1.645	2.056	14.5	2'-1"	1'-11"	1'-9"	3'-7"	1'-6"	1'-6"	2'-6"
3" x 1/4"	1.895	2.842	14.0	2'-2"	2'-1"	1'-11"	4'-1"	1'-8"	1'-8"	2'-10"
3" x 5/16"	2.368	3.553	17.2	2'-6"	2'-4"	2'-3"	4'-9"	1'-11"	2'-0"	3'-6"



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